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CITY DOCUMENTS

— OF THE —

CITY OF LOWELL

MASSACHUSETTS

— FOR THE —

YEAR 1911



LOWELL

LOWELL FREE-TRADING COUNCIL

BUCKLAND PRINTING COMPANY

1913

EXTRACT FROM THE ORDINANCES OF LOWELL

CHAPTER VIII.—CITY DOCUMENTS.

SECTION 5. All City Documents (except the Rules and Regulations for the Government of the Police and Fire Departments) shall be printed in pamphlet form of the size of the Annual Report of the School Committee.

SECTION 6. All City Documents shall be bound together in one volume, under the direction of the City Clerk, and three or more copies shall be placed in the City Library, and one copy in the library of the Middlesex Mechanics' Association, one copy shall be sent to each City of the Commonwealth, to the library of the Harvard College, the Public Library of Boston, the State Library, the Smithsonian Institute at Washington, and the Old Residents' Historical Association of Lowell.

CONTENTS

1. Eighty-sixth Annual Report of the School Committee of Lowell together with Forty-eighth Annual Report of the Superintendent of Schools, 1911.
2. Auditor's Seventy-sixth Annual Report of the Receipts and Expenditures of the City of Lowell, together with the Treasurer's Account and the Account of the Commissioners of Sinking Fund, of the financial year, December 31, 1911.
3. Thirty-ninth Annual Report of the Lowell Water Board and Reports of the Superintendent of Water Works and the City Engineer to the Water Board, for 1911.
4. Reports of the Births, Marriages and Deaths, 1911.

5. Report of the Inspector of Milk for year 1911.
6. Report of the Board of Health, 1911.
7. Report of the Chief Engineer of the Fire Department, 1911.
8. Park Commissioners' Ninth Annual Report, December 31, 1911.
9. Report of the Trustees of the City Library, 1911.
10. Report of the City Solicitor for the year ending December 31, 1911.
11. Report of Buildings Department for the year 1911.

EIGHTY-SIXTH ANNUAL REPORT
OF THE
School Committee
OF THE
CITY OF LOWELL, MASS.
AND THE
FORTY-EIGHTH ANNUAL REPORT
OF THE
Superintendent of Public Schools
1911



F. A. M. TOBIN'S PRINTERY
LOWELL, MASS.
1912

CITY OF LOWELL

Office of the School Committee,

LOWELL, MASS., December 26, 1911.

At a meeting of the School Committee, held December 26, 1911, it was voted to adopt the report of the Superintendent of Schools for 1911 as the report of the School Committee for that year, and to authorize the printing of the report.

In accordance with this vote the report is herewith submitted.

Arthur K. Whitcomb,
Secretary.

ORGANIZATION
OF THE
School Committee
1911

FRANKLIN E. JOHNSON, President.
ARTHUR K. WHITCOMB, Secretary.

Ward 1—EDWARD T. GOWARD, 274 Appleton St.	Term expires 1911
“ 2—THOMAS MAHONEY, Jr., 139 Colburn St.	“ “ 1911
“ 3—EDMUND T. SIMPSON, 393 Wilder St.	“ “ 1912
“ 4—JOHN H. PYNE, 823 Central St.	“ “ 1911
“ 5—JOHN C. FARRINGTON, 182 Perry St.	“ “ 1912
“ 6—CHARLES T. McKENZIE, 101 Coburn St.	“ “ 1912
“ 7—JOHN H. LAMBERT, M. D., 70 Wannalancit	“ “ 1911
“ 8—FRANKLIN E. JOHNSON, 417 Middlesex St.	“ “ 1912
“ 9—CRAVEN MIDGLEY, 169 Meadowcroft St.	“ “ 1911

STANDING COMMITTEES

On Teachers—Messrs. Midgley, Simpson, Pyne.

On Finance—Messrs. Midgley, Lambert, McKenzie.

On Books and Supplies—Messrs. Simpson, Johnson, Mahoney, Farrington, Pyne.

On Evening Schools—Messrs. Goward, Johnson, Lambert, Mahoney, Farrington.

On High School—Messrs. Johnson, Goward, Simpson, Pyne, Farrington.

On School Houses and Hygiene—Messrs. Lambert, Midgley, McKenzie.

On Rules—Messrs. Goward, Mahoney, McKenzie.

ASSIGNMENT OF SCHOOLS

Mr. Goward, Ward 1—High, Varnum, Edson, Kirk, Eliot, Tenth; Varnum Kindergarten.

Mr. Mahoney, Ward 2—Green, Worthen, Morrill.

Mr. Simpson, Ward 3—High, Lincoln, Franklin, Howard, Powell, Dover, Grand, Laura E. Lee; Dover, Lincoln, Franklin and Laura E. Lee Kindergartens.

Mr. Pyne, Ward 4—High, Butler, London, Weed, Agawam, Carter, Lyon; Agawam and Chapel Kindergartens.

Mr. Farrington, Ward 5—High, Colburn Grammar, Colburn Primary, Charles, Central, Ames, Cottage; Charles street Kindergarten.

Mr. McKenzie, Ward 6—Greenhalge, West Sixth, Billings, Lakeview, Cabot, Cheever.

Dr. Lambert, Ward 7—Bartlett, Pawtucket, Cross, New Moody, Lexington; Pawtucket and Bartlett Kindergartens.

Mr. Johnson, Ward 8—High, Highland, Washington, Pine, Middlesex Village; Pine street Kindergarten.

Mr. Midgley, Ward 9—Moody, Riverside, Pond, High street, Sycamore; Moody Kindergarten.

ASSIGNMENT OF EVENING SCHOOLS

Mr. Goward—High, Drawing, Edson.

Dr. Lambert—Bartlett, Green, Cheever, Middlesex Village.

Mr. Farrington—Greenhalge, Old Moody, Colburn.

Mr. Mahoney—Butler, Franklin, Riverside.

Mr. Johnson—Mann, Worthen.

ARTHUR K. WHITCOMB, Superintendent of Public Schools.

Office in City Hall.

Office Hours—One hour after the forenoon session of schools and from
10 to 12 o'clock on Saturday forenoon. Telephone 2728.

Home Telephone 2030.

HENRY L. WILLIAMS, School Supply Agent.

Office in School Supply Room, City Hall.

Hours—8 a. m. to 12.30 p. m., and 1 to 5 p. m. Office Telephone 2727.

Home Telephone 2714.

WM. F. THORNTON, Supervisor of Janitors.

Office, City Hall, Third Floor.

Office Hours—12 m. to 1 p. m. Home Telephone 3423

TRUANT COMMISSIONERS

WM. F. THORNTON,

CAMILLE ROUSSIN, HENRY L. WILLIAMS,

JOHN J. WALKER

Office in City Hall, Third Floor

Office Hours—12 m. to 1 p. m. for all the working days of the year.

REGULAR MEETINGS OF THE SCHOOL COMMITTEE

January 31	February 28	March 28	April 25
May 31	June 27	July 25	August 29
September 26	October 31	November 28	December 26

ORGANIZATION
OF THE
School Committee
1912

JOHN C. FARRINGTON, Chairman.
ARTHUR K. WHITCOMB, Secretary.

PATRICK J. BAGLEY, D. M.D., 19 Lombard St.	Term expires 1913
JOHN C. FARRINGTON, 182 Perry St.	“ “ 1913
CHARLES T. McKENZIE, 101 Coburn St.	“ “ 1912
JAMES B. O'CONNOR, M. D., 188 Moore St.	“ “ 1912
JOHN JACOB ROGERS, 444 Andover St.	“ “ 1912

STANDING COMMITTEES

On Teachers—Dr. Bagley, Mr. Farrington, Mr. McKenzie, Dr. O'Connor, Mr. Rogers.

On Books and Supplies—Mr. Farrington, Dr. Bagley, Mr. McKenzie, Dr. O'Connor, Mr. Rogers.

On Evening Schools—Mr. McKenzie, Dr. Bagley, Mr. Farrington, Dr. O'Connor, Mr. Rogers.

On High School—Dr. O'Connor, Dr. Bagley, Mr. Farrington, Mr. McKenzie, Mr. Rogers.

On Rules—Mr. Rogers, Dr. Bagley, Mr. Farrington, Mr. McKenzie, Dr. O'Connor.

On Finance—Dr. Bagley, Mr. Farrington, Mr. McKenzie, Dr. O'Connor, Mr. Rogers.

On School Houses and Hygiene—Dr. O'Connor, Dr. Bagley, Mr. Farrington, Mr. McKenzie, Mr. Rogers.

On Industrial School—Mr. McKenzie, Dr. Bagley, Mr. Farrington, Mr. Rogers, Dr. O'Connor.

ASSIGNMENT OF SCHOOLS

Dr. Bagley—High, Industrial, Bartlett, Pawtucket, Green, Cross street, New Moody street, Lexington avenue, Worthen street, Morrill, Kirk street, Cabot street; Pawtucket and Bartlett Kindergartens.

Mr. Farrington—High, Industrial, Colburn, Edson, Colburn Primary, Charles street, Ames street, Central street, Eliot, Cottage street, Chapel street and Charles street Kindergartens.

Mr. McKenzie—High, Industrial, Varnum, Greenhalge, Tenth street, West Sixth street, Billings street, Lakeview avenue; Varnum Kindergarten.

Dr. O'Connor—High, Industrial, Butler, Lincoln, Highland, Riverside, Franklin, London street, Weed street, Agawam street, Carter street, Lyon street, Howard street, Grand street, Laura Lee, Dover street, Pine street, Middlesex Village; Lincoln, Franklin, Dover street, Laura Lee, Pine street and Agawam street Kindergartens.

Mr. Rogers—High, Industrial, Moody, Washington, Pond street, High street, Sycamore street, Powell street; Moody Kindergarten.

ASSIGNMENT OF EVENING SCHOOLS

Mr. McKenzie—High, Drawing, Cabot St.

Mr. Farrington—Greenhalge, Colburn, Edson.

Dr. O'Connor—Butler, Green, Franklin

Dr. Bagley—Worthen, Mann, Middlesex Village

Mr. Rogers—Old Moody, Riverside, Howard St.

ARTHUR K. WHITCOMB, Superintendent of Public Schools.

Office in City Hall.

Office Hours—One hour after the forenoon session of schools and from
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REGULAR MEETINGS OF THE SCHOOL COMMITTEE.

January 30

February 27

March 26

April 30

May 28

June 25

July 30

August 27

September 24

October 29

November 26

December 31

REPORT OF THE Superintendent of Schools

Office of the Superintendent of Schools,

December 31, 1911.

Gentlemen of the School Committee:

In accordance with your rules, I have the honor to submit the following as my report for the year 1911:

SUMMARY OF STATISTICS

Valuation of City (basis of taxation in 1911)	\$81,581,268.00
Valuation of school houses and lots	1,959,750.00
Rate of taxation (\$18.90 per \$1000)	1.89 per cent.
Expenditures for day schools	366,425.26
Expenditures for evening schools	21,483.36
Day school expenditures to total valuation .....	.45 per cent.
Day and evening school expenditures to total valuation .....	.47 per cent.
Population by census of 1910	106,294
Number of polls	26,426
Decrease for the year	770
Number of children between five and fifteen years of age, September 1, 1911, males 7320; females 7473	14,793
Ward One, 1044 Ward Six, 3311	
" Two, 1457 " Seven, 1474	
" Three, 1625 " Eight, 1217	
" Four, 1573 " Nine, 1699	
" Five, 1393	
Increase in the year	273

Number between 7 and 14 (compulsory school age)....	10,793
Increase for year.....	314
Number of public day schools.....	62
One High, thirteen Grammar, thirty-four Primary, two Mixed, twelve Kindergarten.	
Number of public school buildings.....	59
Occupied by day schools, 53; used for evening schools, 3; unoccupied, 3.	
Number of school rooms in actual use.....	305
High, 37; Grammar, 128; Primary, 123; Mixed, 4; Kindergarten, 13.	
Elected teachers Dec. 31, 353; on leave, 15; in service..	338
Teachers in service Dec. 31, including clerk in H. S....	349
Elected, 338; permanent substitutes, 10; clerk at High School, 1.	
Subdivisions of Elected Teachers in service:	
High, 41, 14 men, 27 women; Grammar, 145, 11 men, 134 women; Primary, 119 women; Mixed, 4 women; Kindergarten, 21 wom- en; Drawing, 2 women; Music, 2, 1 man, 1 woman; Kindergarten supervisor, 1 woman; Sewing, 1 woman; Manual Training, 1 woman; School visitor, 1 woman.	
Teachers in Evening Schools, term of 1910-11.....	126
High, 30; Elementary, 80; Drawing, 16.	
Pupils enrolled in Evening Schools, term of 1910-11...	3489
High, 1202; Elementary, 1943; Drawing, 344.	
Whole number of pupils enrolled in Day Schools.....	12,700
High, 1262; Grammar, 5522; Primary, 5192; Mixed; 154; Kindergartens, 570.	
Average number belonging to Day Schools.....	10,840
High, 1179; Grammar, 4911; Primary, 4265; Mixed, 119; Kindergartens, 366.	
Average attendance.....	9983
High, 1120; Grammar, 4592; Primary, 3881; Mixed, 109; Kindergartens, 281.	

SUPERINTENDENT'S REPORT

13

Average number belonging to each teacher.....	33
High, 32; Grammar, 35; Primary, 35; Mixed, 30; Kindergarten, 16.	
Average belonging to each room.....	36
High, 32; Grammar, 39; Primary, 35; Mixed, 30; Kindergarten, 30.	
Average per cent. of attendance.....	92
High, 95; Grammar, 93; Primary, 91; Mixed, 91; Kindergarten, 77.	
Average cost of each pupil, for tuition only, based on the average number belonging.....	\$22.97
High, \$36.13; Grammar, \$22.70; Primary, and Mixed, \$19.88; Kindergarten, \$33.61.	
Total cost per pupil for tuition, salaries of janitors, medical inspection, six-sevenths of supervision, supplies, fuel, and all incidentals, based on enrol- ment	\$28.86
Same based on average number belonging.....	\$33.81
Average cost per pupil in evening schools for teachers and janitors, based on average number belonging, \$8.42; in evening drawing schools, \$10.72; in even- ing schools, tuition, fuel, light, supplies and one- seventh of supervision included, \$10.69; evening drawing schools, fuel, light and supplies included, \$12.75.	

INDUSTRIAL SCHOOLS.

(Not included in the foregoing, Sept. to Dec. only.)

Boys: Building, 1; rooms, 8; teachers, 6; pupils enrolled, 121; average belonging, 110; average attending, 104; per cent. attendance, 96.
 Girls: Building, 1; rooms, 3; teachers, 3; pupils enrolled, 64; average belonging, 58; average attending, 54; per cent. attendance, 93.
 Part time housekeeping courses, one afternoon a week, 170.

RECEIPTS AND EXPENDITURES

Receipts

Appropriated and assessed in 1911..... \$401,969.74

Expenditures

Paid to teachers of day schools:—

High School..... \$ 42,595.88

Grammar Schools—Bartlett School	\$10,097.63	
Butler School	13,045.02	
Colburn School	6,273.84	
Edson School	9,532.54	
Green School	9,836.39	
Greenhalge School	6,955.13	
Highland School	11,999.04	
A. Lincoln School	8,964.02	
Moody School	9,269.58	
Pawtucket School	6,171.32	
Riverside School	2,199.00	
Varnum School	12,597.81	
Washington School	4,539.53	
	<hr/>	111,481.35

Primary and Mixed Schools..... 87,164.75

Kindergartens 12,301.13

Special teachers..... 5,094.14

Total paid for instruction in day schools..... 258,637.25

School physicians and school visitor:—

Paid school physicians..... \$ 1,800.00

Paid school visitor..... 637.00

2,437.00

Janitors:—

Paid janitors of day schools..... 47,173.87

Evening Schools:—

Teachers, High and Elementary Schools.. \$11,977.25

Teachers, Drawing and Art Schools..... 2,434.00

Janitors 2,668.00

17,079.25

Cost of supervision:—

Superintendent of Schools.....	\$ 3,000.00	
Office Assistant.....	651.66	
Truant officers (four).....	4,425.00	
Assistant in supply room.....	782.75	
	<hr/>	8,859.41
Industrial School teachers and janitors.....		5,050.66
		<hr/>
Total Salaries, Industrial Schools omitted.....	\$334,186.78	
Total Salaries, Industrial Schools included.....	339,237.44	

Bills

Coal (evening schools (\$813.68).....	\$16,280.75
Wood (evening schools \$15.50).....	782.25
Water (evening schools \$22.82).....	1,574.58
Gas (evening schools \$748.97).....	1,223.83
Electric lighting (evening schools \$651.95)...	936.95
Electricity for power.....	1,888.70
Repairs by Supt. Public Buildings.....	1,331.21
Sanitary bubbling fountains.....	2,850.36
Renovating furniture.....	987.75
General repairs.....	600.11
Electrical repairs (evening schools \$179.77)..	681.08
Text books (evening schools \$326.33).....	7,063.63
Writing books, stationery, etc. (eve. schools \$247.36)	4,599.42
Supplies for janitors.....	2,139.03
Material for sewing.....	299.77
Supplies for kindergartens.....	461.04
Supplies and apparatus, H. S. laboratories....	141.52
Manual training supplies (eve. school \$22.80)	303.02
Bills of Middlesex County, board of truants..	4,025.13
Printing, (eve. sch. \$136.25)	1,191.93
Annual Report, printing 100 pages.....	335.00

Board of horses, carriage repairs, etc.....	745.00	
Horse, wagon and harness.....	570.00	
High School Regiment.....	298.50	
Graduations (evening schools \$57.83).....	470.60	
Medical Inspection supplies.....	15.60	
Telephones	69.63	
Manual training in grammar schools.....	374.72	
Rent of room and land.....	12.50	
Traveling expenses, supervisors.....	120.04	
Examinations of candidates for teaching positions	51.65	
Industrial Schools.....	9,010.46	
Miscellaneous	1,296.54	
Total of bills, Industrial Schools omitted.....	\$ 53,721.84	
Total of bills, Industrial Schools included.....	62,732.30	
Salaries and bills, Industrial Schools omitted.....	387,908.62	
Salaries and bills, Industrial Schools included.....	401,969.74	

Analysis of Industrial School Expenses

Salaries of day school teachers.....	3,517.91	
Janitors of day schools.....	398.75	
	<hr/>	3,916.66
Salaries of evening school teachers.....	897.50	
Janitors of evening schools.....	236.50	
	<hr/>	1,134.00
Total of salaries.....		5,050.66
Repairs of buildings.....	3,057.34	
Equipment and supplies.....	5,953.12	
	<hr/>	9,010.46
Total of salaries and bills.....		14,061.12
Tuition charges, non-resident pupils	1,811.25	
Expected reimbursement by State.....	3,244.66	
	<hr/>	5,055.91
Probable net expense in 1911.....		9,005.21

School House Repairs

Expenditures by Lands and Buildings Department.....	\$ 32,275.20
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SCHOOL CENSUS AND ATTENDANCE

The annual census of children between five and fifteen years of age was taken in September, 1911, and recorded the names of 14,973 children, a gain of 273 over the census of 1910. Polls fell off 770 in the same time, a reverse of conditions the previous year, when children decreased 220 although polls increased 736. School enrolment was 12,700. Children not in public schools were doubtless all, or very nearly all, in private or parochial schools, as the census takers found scarcely any who were not enrolled in school somewhere.

This census, by the way, has no value to the city, and is taken only because required by statute. Its records were once used to some small extent in making out work certificates, but such use ceased in Lowell several years ago. Later the State, by requiring other proof, practically forbade their use in determining age. Twenty years ago the census was taken by enumerators at five cents a name. Now it is taken by the truant officers, with some help from the janitors, without any extra expense beyond a very small addition of salary to those janitors who assist in the work. While the money cost is therefore slight the census is still a burden for which we have no compensating advantage, and relief from it would be a boon.

RECEIPTS AND EXPENDITURES.

Salaries of day teachers increased from \$255,209 in 1910 to \$258,637 in 1911, a gain of \$3,428. This was due to an increase of \$100 a year to eight grammar masters and of \$200 to three others; to a slight increase in a few other salaries; to the employment of one more special teacher; of additional teachers at the Bartlett and Washington schools through the year, and of still other new

teachers at the Moody, Greenhalge and Washington schools since September, and to the pay now given to permanent substitutes. Salaries of janitors increased from \$44,831 to \$47,174, a gain due to increase in force. Evening school salaries, on the other hand, decreased from \$18,799 to \$17,079. School physicians and supervision remained practically without change. The total of all salaries, not including those of the new industrial schools, to which reference will be made later, was \$334,186, an increase of \$4,383 over 1910.

If teachers, janitors and other employees remain as now through 1912, the amount of their salaries will be exactly \$340,210.65. This sum is the result of a careful addition of individual salaries, and may fairly be assumed to be the minimum amount which will be needed in the year, industrial school salaries excepted.

Fuel, light, power, text books, equipment and supplies, to include all items of expense other than salaries, cost \$53,721.84 in 1911, an increase of \$2,804.72 over 1910. The increase is more than accounted for by the single item of sanitary bubbling fountains with which the common drinking cup was replaced. This expense, together with that of renovating school furniture, and several other similar items, belongs to the department of lands and buildings, but as that department failed to undertake the work the school committee took it in charge, to the great advantage of the schools. Expenses in 1912, other than for industrial schools, are likely to be much the same as in 1911, and about the same sum will be needed to meet them.

In text books, stationery, printing, and supplies of all kinds which are sent to schools on the order of the master or principal, there was the same rigid economy as in past years, as the subjoined tables will show:

SUPERINTENDENT'S REPORT

19

	Cost 1911	Pupils 1911	Average 1911	Average 8 Years
High School	\$4,625.45	1179	\$3.92	\$3.96
Grammar Schools				
Bartlett	\$ 437.48	447	\$.98	\$1.49
Butler	852.28	659	1.29	1.40
Colburn	515.64	319	1.62	1.41
Edson	516.09	446	1.16	1.10
Green	381.05	365	1.04	1.29
Greenhalge	399.58	284	1.41	2.02
Highland	498.12	485	1.03	1.28
Lincoln	500.12	438	1.14	1.36
Moody	316.82	393	.81	1.05
Pawtucket	208.11	245	.85	1.22
Riverside	58.96	109	.54	1.00
Varnum	549.54	546	1.01	1.09
Washington	385.34	175	2.20	
Totals	5,619.13	4911	1.14	1.31
Primary Schools				
Agawam	\$ 19.97	91	\$.22	\$.37
Ames	46.37	97	.48	.37
Bartlett	8.83	212	.04	
Billings	33.76	140	.24	.44
Cabot	24.10	72	.33	.45
Central	51.13	139	.37	.42
Charles	56.14	160	.35	.47
Cheever	17.78	69	.26	.44
Cottage	35.95	107	.34	.38
Carter	44.81	179	.25	.38
Cross	41.62	74	.56	.61
Dover	49.79	114	.44	.47
Eliot	47.38	136	.35	.32
Franklin	46.47	132	.35	.45
Greenhalge	42.11	106	.40	.25
Howard	106.63	152	.70	.57
Kirk	18.79	54	.35	.41
Lakeview	79.42	144	.55	.53
Lexington	18.85	21	.89	.95
London	57.42	118	.49	.56
Lyon	99.46	194	.42	.51
Lincoln	92.64	90	1.03	.40
Morrill	68.32	76	.90	.58
Middlesex	75.83	98	.77	.71
Moody Street	94.24	184	.51	.39
Oaklands	27.05	74	.37	.52
Pine	50.86	104	.49	.48
Pond	38.78	163	.24	.32
Powell	37.92	94	.40	.62
Laura Lee	82.67	207	.40	.40
Riverside	16.67	85	.20	.30
Tenth	45.03	181	.25	.29
Colburn	44.40	133	.33	.42
Weed	23.46	102	.23	.48
West Sixth	71.16	167	.43	.43
Worthen	44.69	115	.39	.47
Totals	1760.50	4384	.40	.46
Kindergartens	484.82	366	1.32	1.03
Totals for all schools	12,489.90	10,840	1.15	1.16

School department earnings in 1911 were \$6,915.01, of which nearly all was for tuitions. This sum went to the general treasury fund, and had no effect in reducing expenditures for schools. Revenues in 1912 are estimated at \$7,000 for tuitions in the high and grammar schools, \$4,500 for tuitions at the industrial school, and \$3,245 for state reimbursement of industrial school expenses, a total of \$14,745.

SCHOOL HOUSES

The school houses of the city are generally in good condition, a fact for which much credit is due to Inspector Dow so far as repairs are concerned; to the committee on school houses, and especially to its chairman, Dr. Lambert, for wise and progressive plans and rules, and to janitors, teachers and pupils for persistent and well-directed efforts to keep houses clean and sweet. An investigation of the best houses in six or eight of the best cities of the state, made by Janitor Superintendent Thornton recently, disclosed no houses better kept than our own, and many in far worse condition. Among things which are new, or which, if old, have been so systematized as to be much improved, may be mentioned the following:

Temperature records are taken by janitors in all school rooms four times a day. Twenty years ago such records were made by teachers, and some improvement followed, but the present method is vastly more effective in producing desired results. The better knowledge of conditions, and the further knowledge that these conditions will be matters of permanent record, give janitors both the information and the incentive to strive for, and to achieve, the best results. Individual towels are supplied to all pupils as needed, by a method so simple as to ensure use without abuse, and at a cost so small as to be

inconsiderable. Toilet paper, always supplied irregularly, is now furnished to all on a plan at once effective and inexpensive. The feather duster has been replaced by dust-absorbing cloths. Dust absorbents are also used in sweeping, or the floors are sprayed with dust-laying oils. This last has not, it must be confessed, reached perfection in application, for skirts of teachers have sometimes suffered, but further experiments will, it is hoped, remedy bad effects and ensure good ones. Basements are whitewashed each summer, and are kept clean and sweet at all times. Corridors and rooms are swept twice each week at the least, and as much oftener as is needed to keep them free from dust and litter. Vacuum cleaners we do not yet possess, but they have at least been considered, and if there is anything more or better that we can do we are anxious to find and do it.

No new house was finished or begun in 1911. A large addition to the High school building was asked for by the school committee, and received much favorable consideration in the city council, but finally failed of a majority support. The High school has 49 more students this year than last, and the need of an addition is so much the greater. The 1910 report contained a full and conclusive explanation of the needs of the school, and argument for an addition to its building, written by Headmaster Irish, and to this citizens desiring a candid statement of facts and conditions are respectfully referred.

In the meantime, new needs have developed. The Lincoln school has more pupils than can be accommodated in its twelve rooms, and now has one class sitting in a corridor. The Lincoln building has well-lighted space on its third floor which can easily be finished into two good school rooms. The Greenhalge school has two classes in its assembly hall, separated only by cloth partitions. The house, of ten rooms, was originally planned

to allow of a 4-room addition, for which yard room is abundant. It is now time for the additional building to be erected. The Bartlett school is so crowded that some first grade pupils are necessarily put on part time, the second occasion when anything of the sort has happened in Lowell. The building here, too, has space on its third floor out of which school rooms can be made. The 1911 school committee accepted this solution of the difficulty and asked for the making of other rooms within the building, but the city council failed to respond favorably.

In view of these conditions there is occasion for asking the municipal council for an addition to the High school house as requested last year, for a 4-room addition at the Greenhalge, and for third-floor rooms as needed in the Lincoln and Bartlett buildings.

SCHOOLS AND TEACHERS

New rooms have been opened at the Washington, Lincoln, Moody and Greenhalge schools, and to make room for the one at the Moody the kindergarten, which has hitherto been housed in the Moody building, has been transferred to the High street house. The principal of the Pond street school having resigned, her school was consolidated with the High street school, though the new school continues to occupy both houses. In September the Cheever street school was closed, its two ungraded rooms being transferred to the Green school, and its primary pupils, with their principal, being transferred to the Cabot street school.

Following are the changes in the roll of teachers:

DIED

	Term of Service
Frank B. Sherburne.....	28 years
Charlotte E. Draper.....	41 years
Flora I. Moffitt	24 years
Josephine C. Coburn.....	8 years

RESIGNED

	Term of Service
Mary E. Walsh.....	14 years
Ellen A. O'Connell.....	15 years
Edwin M. Roberts.....	7 years
Mary J. Alger.....	43 years
Caroline H. McGarvey.....	6 years
Ida M. Bennett.....	3 years
Mabel H. Ela	11 years
Carrie A. Paul.....	20 years
Winifred C. Haggerty.....	26 years
Maude E. Moody.....	5 years
Elizabeth F. Garra.....	18 years
Warren C. Shaw.....	1 year
Leah A. DeMerritt.....	1 year
Loretta L. Ward.....	6 years

TRANSFERRED

Mary E. Richardson, from the London to the Franklin.
 Florence R. Foote, from the Colburn to the High School.
 Susan F. Burbank, from the Edson to the High school.
 Cora E. Jones, from the Green to the Moody.
 Ida J. Clarke, from the Cheever street to the Cabot street.
 Eugenie V. Frappier, from the Cheever street to the Agawam street.
 Elizabeth Provencher, from the Cheever street to the Green.
 Helen J. Kohawn, from the Cheever street to the Greenhalge.
 Mary T. Whelley, from the Cabot street to the Morrill.
 Grace M. Thurber, from the Greenhalge to the Varnum.
 Marion A. Stevens, from the Lakeview avenue to the Charles street.
 M. Alice Mather, from the Moody to the High School.
 Eleanor LeLacheur, from New Moody street to the Bartlett Primary.
 Mabel A. Metcalf, from Tenth street to the Varnum.
 Anna T. Coffey, from the Morrill to the Highland.
 Sara E. Ames, from Bartlett Primary to Bartlett Grammar.
 A. Gertrude Stiles, from Bartlett Primary to Bartlett Grammar.

ELECTED

Alice M. Hagar, Assistant in Music.
Arthur W. Trubey, to the High school.
Caroline Wescott, to the High school.
Charles E. Seede, to the High school.
Bertha W. Sherburne, to the Bartlett.
Lena Collins, to the Colburn.
Elizabeth G. Common, to the Pawtucket.
Sadie A. Connor, to the Colburn.
Elizabeth A. Conway, to the Colburn.
Marie R. Sullivan, to the High school.
Frances L. Donovan, to the Colburn.
Kathleen E. Driscoll, to the Bartlett.
Laura F. Greene, to the Washington.
Mary J. Moynahan, to the Colburn.
Katharine P. O'Brian, to the New Moody.
Edith T. Sanborn, to the Moody.
Leona M. Small, to the Greenhalge.
Louise C. Thomas, to the Colburn.
Lillian E. Alister.
Florence E. Archibald.
Mary Alice Cochrane.
Ruth Crowell.
Julia M. Driscoll.
Marianna L. Donovan.
Margaret F. Donovan.
Myrtle M. Killpatrick.
Alice G. McGilly.
Olive J. Palm.
Mary R. Seery.
Millie A. Severance.
Julia G. Slattery.
Helen M. Whitcomb.
Violet Stocks.

Mary C. Timmons.

William H. Dooley, Principal of the Industrial school.

Harland E. Miller, to the Industrial school.

William A. Webb, to the Industrial school.

Walter F. Connolly, to the Industrial school.

Fred F. Wiggin, to the Industrial school.

Clarence E. Lesuer, to the Industrial school.

Herbert L. Carragher, to the Industrial school.

Alice L. Gookin, to the Industrial school.

Ruberta Bramhall, to the Industrial school.

Anna M. O'Day, to the Industrial school.

The old adage that "death loves a shining mark" has surely been well exemplified this year. Frank Sherburne was the greatest teacher of the classics I have ever known. As a man none knew him but to love him, and his loss is irreparable. Miss Draper had been a teacher in the High school for more than forty years, and had always been recognized as one who added much to its strength and efficiency. Few would be more greatly missed or more sincerely regretted. Miss Moffitt was easily in the first class of teachers in Lowell, or anywhere else, and Miss Coburn was one of the most singularly successful teachers of music I have ever known. Teachers and pupils alike rejoiced in her coming, and did their best for love of her as well as for love of the music. These teachers have passed on, but the inspiration of what they did and what they were has been built into the lives of hundreds of their pupils and should have its effect for good on the lives of all their fellow workers.

Of those who resigned, Mr. Roberts, Mr. Shaw, Miss Bennett and Miss Ela did so to accept better positions elsewhere, Misses Alger, Paul and Haggerty to enjoy a well-earned rest, and all the others to marry.

The Training school was closed in 1910, but with the condition that its graduates should retain all the rights and privileges which would have been theirs had the school been continued. This pledge was kept to the letter, and at the last committee meeting of the year all graduates who were still candidates were elected teachers.

In accordance with new rules applicants for teachers' positions were advertised for in 1910, November 15 of that year being made the limit of time within which applicants might be received in the school year 1910-11. The conditions required were simply a college or normal school graduation and a year's successful experience in teaching, the latter to be attested by the superintendent under whom the teaching had been done. Sixty-two applicants responded. Of these a few proved to be technically ineligible, and some withdrew voluntarily, but forty-eight met all conditions so far as applications were concerned. These were visited by supervisors while at work, and forty-three were approved. Of these twenty-four appeared June 1, 1911, and were given a written examination, the questions for which were prepared by an out-of-town school department. No rank was fixed as a standard for passing this examination, but the school committee, knowing the candidates only by number, took from the top of the list the first twelve, the number which was believed to be adequate to the need of the schools for substitutes in the school year 1911-12. Of the number thus accepted two chose not to come to Lowell, and but ten reported for service in September. These were assigned to various schools,—to be shifted from time to time as supernumerary helpers, no one being needed at first to take the place of an absent teacher. They were, and are, paid regular substitute's

pay, \$2.50 a day, and they are in line for election to permanent positions as fast as vacancies occur. In the course of a few weeks calls to take the places of absent teachers became frequent, and at the end of the year all were employed most of the time as regular substitutes. All have done well, and several have done superior work. Whatever may be thought of this method of selecting teachers, it has worked well on a first trial, for it has given us ten candidates who are certainly much above the average.

Early in October, 1911, notice was given that applications would again be in order, and thirty-three were soon received. Papers proved to be complete and correct in all cases, and preliminary approval was given to all candidates. Visitation assignments were then made, and the work of the year in this respect was thus completed to date.

Pupils by Grades

	Males	Females	Total	Per Cent Decrease		Males	Females	Total	Per Cent Decrease
Kind'tens	187	225	412		Grade 7,	389	420	809	11
Grade 1,	891	828	1719		" 8,	279	279	558	31
" 2,	718	713	1431	17	" 9,	244	299	543	3
" 3,	624	606	1230	14	" 10,	194	200	394	27
" 4,	653	618	1271	*3	" 11,	162	207	369	6
" 5,	540	516	1056	17	" 12,	112	139	251	32
" 6,	456	439	895	15	" 13,	74	113	187	25
*Increase						—	—	—	
					Totals	5523	5602	11125	

The foregoing table shows variations between grades for which no adequate explanation is suggested. Not only is there no falling off between the third grade and the fourth, as there is between all other grades, but there is an actual increase of 41! In 1910 there was a decrease between these grades, though of less than one per cent., but in 1909, as in 1911, there was an actual in-

crease. The great record of the third grade this year is no accident, therefore, but only the culmination of a series. All the grades of the primary schools and grades five, six and eight of the grammar schools, improved their rating in 1911, but gains were so balanced by losses that the total average shows but the slight improvement of less than one per cent. The subject is worthy of much more careful study than has yet been given it.

HIGH SCHOOL

The High school graduated a class of 211 in June, and received an entering class of 365 in September. Of the latter 285 were from grammar schools, 40 from parochial schools, 34 from adjoining towns which possess the certificate privilege, and 6 were admitted by examination. The number of grammar school pupils who were promoted to the High school was 395. Of these 100, or 28 per cent., failed to present themselves at the High school in September. The average age of the entering class was 14 years 10 months.

Exercises of graduation were held in the Opera house June 28. Following is the program of the graduates, the names of the Carney medal scholars, and the names of the honorable mention students:

-
- | | | | |
|---|------------|-------------------------------------|---------|
| 1 | OVERTURE | Maritana | Wallace |
| | | Hibbard's Orchestra | |
| 2 | CHORUS | Pilgrim Chorus (From "I. Lombardi") | Verdi |
| 3 | SALUTATORY | A Woman of the Eighteenth Century | |
| | | Gertrude Ellen Bush | |

4 SEMI-CHORUS

(a) Belle Nuit, O Nuit D'Amour

(From "The Tales of Hoffman") Offenbach

(b) The Rosary Ethelbert Nevin

First Sopranos: Misses Powers, '11, Hogan, '11, Jaques,
'11, Clough, '11Second Sopranos: Misses Ray, '11, Naylor, '11, Hath-
away, '11First Altos: Misses McDermott, '12, Emerson, '11,
Fox, '12Second Altos: Misses Lofgren, '12, Eveleth, '11,
Egan, '145 CONCERT WALTZ Louise W. E. Owen
Hibbard's Orchestra

6 REMARKS AND INTRODUCTION OF SPEAKER

Mr. Franklin E. Johnson, President School Board

7 ADDRESS

President W. H. P. Faunce, Brown University

8 CHORUS Waltz and Chorus (From "Faust") Gounod

9 PRESENTATION OF THE LOWELL HISTORICAL
SOCIETY PRIZES

For Best Historical Essays on the following subject:

"Chelmsford"

First Prize: \$10 in gold, Mildred M. Durham

Second Prize: \$5 in gold, Ida F. Cummings

Presented by Rev. A. St. John Chambré, D. D.

10 GLEE CLUB

(a) Winter Song Bullard

(b) Little Tommy Went a-Fishing. Macy

First Tenor: Messrs. Hillier, '12, Knapp, '12, Hart-
ford, '12Second Tenor: Messrs. Panton, '14, Johnson, '11,
Toupin, '13First Bass: Messrs. Gleason, '11, Teeson, '11, Wilson,
'13, Brennan, '11

Second Bass: Messrs. Leggat, '12, Finnegan, '11,
Hazeltine, '12, Tibbetts, '11

11 PRESENTATION OF CARNEY MEDALS

Honorable mention of those who have attained a scholar-
ship rank of 90 per cent.

Mr. Arthur K. Whitcomb, Superintendent of Schools

12 SEMI-CHORUS Doris (Pastorale) Ethelbert Nevin

Violin and 'Cello obligato

Violin—Chas. D. Whidden, '13

'Cello—R. B. Whidden, '11

13 VALEDICTORY The United States, 1825-1911

Lauriston Edward Knowlton

14 CHORUS Song of the Armorer Geo. B. Nevin

15 PRESENTATION OF DIPLOMAS

His Honor, the Mayor, John F. Meehan

16 CLASS ODE Air, "Fair Harvard"

Words by Marion Martin

The years spent together we ne'er shall forget,
And the memories clustering here
Of the strong ties of friendships both loyal and true,
Will forever continue most dear.
Together we've worked, and together we've played;
Work and play whose results we'll not know
Till the lessons we've learned in these days bright and fair,
Bear fruits in the fields where we go.

Our school days are over and now we go forth
Each one on his separate way;
And whatever our duty, whatever our task,
We will do it the best that we may,
With courage undaunted and hearts strong and true,
We will meet every foe great and small,
Till at last, when the battle in triumph shall end
We are welcomed victorious o'er all.

17 FINALE American Republic

Thill

Hibbard's Orchestra

Emile C. Lavigneux, Director

GRADUATES

Five Years' Course

Paresky, Harold

Sullivan, William Francis

Wing, Howard Whitney

Four Years' Course

Abels, Carlotta Marie

Currul, Margaret

Alway, Jennie Esther

Davis, Myrtle Adela

Brady, Leah Veronica

Donahue, Josephine Alice

Bramhall, Dorothy

Donohoe, Teresa Ursula

Brazier, Helen Ingeborg

Duffy, Alice

Brazier, Hilda Fletcher

Emerson, Mildred

Brooks, Mina Fraser

Estes, Dorothy

Bush, Gertrude Ellen

Farmer, Lillian Winnifred

Carey, Marion Gertrude

Farrington, Helen Louise

Carleton, Brenda

Flanagan, Sadie Gertrude

Cary, Helen Howe

Fox, Helen Mabel

Chase, Mary Elsie

Gillick, Catherine Teresa

Clough, Adelaide Frances

Gordon, Myrtle Fannie

Cluin, Mary Louise

Greene, Charlotte

Coleman, Annabel Margaret

Grundler, Sophie Regina

Cooney, Marion Estelle

Hamilton, Gladys Eaton

Cryan, Catherine Louise

Hathaway, Ruth Florence

Cummings, Ida Frances

Henderson, Eva Pearl

Herd, Annie Jean Braid	McPadden, John Joseph
Hession, Gertrude Adelaide	McQuade, William Joseph
Hogan, Elizabeth Irene	Neyman, Julius Ellis
Howe, Clare Eileen	Nolan, Timothy Aloysius
Ingalls, Paul Vernon	Pihl, Carl Albion
Johnson, Herbert Eric	Pratt, Ernest Frederick
Jones, Charles Everett	Reardon, William Joseph Aloysius
Kearney, Francis James	Robertson, George Offutt
Kirkland, Allan Rae	Runels, Chester Morrill
Knowlton, Lauriston Edward	Russell, Nelson Bateman
Lane, Oliver Fellows	Spalding, Frederic French
Liddell, William Andrew	Tabrisky, David
Mack, Thomas Joseph	Teeson, Ercell Arthur
Meigs, Joe Vincent, III	Thompson, Leonard Artemus
Monahan, John Carroll	Tibbetts, Norris Lowell
Morse, Stearns	Toupin, Adolph Edward
Moynahan, John Edward	Whidden, Roswell Brown
McCann, John Joseph	Wiggin, William Burton
McCann, Luke	Woodward, Edward Francis
McKinley, John Douglas	Wright, Samuel Thompson
McLaughlin, Paul Virgil	

Three Years' Course

Blackburn, Marguerite Mary	Farrell, Elizabeth Gertrude
Boynton, Inez	Fling, Althea Lillie
Burrill, Alice Mildred	Goldman, Fannie Frances
Cullen, Mary Frances	Hadley, Maude Eva
Delany, Catherine Rose	Hawes, Mary Olive
Donahue, Mary Alice	Hunter, Helen
Dows, Eleanor Gertrude	Jaques, Mary Emily
Durham, Mildred Mary	Jennings, Marguerite Frances
Emerson, Edith Elizabeth	Kittredge, Lois
Eveleth, Olive	Knowles, Lily Frances Farleigh

ers, and to give permanent tenure to "all instructors" with the single exception stated in the rule.

The rule in regard to secret societies was not made on account of any wrong-doing on the part of the two or three fraternities which High School students have formed in recent years, but wholly on general principles. The committee was aware that objectionable things have been done elsewhere, and that the schoolmen of the country and good citizens in general are practically unanimous in holding that such organizations are harmful. They are new enough so that but few states have any law against them, but it is stated that statutes forbidding them, or upholding school committees in abolishing them, have been enacted in every legislature where the question has been raised. Massachusetts has as yet no law on the subject, but will doubtless enact one promptly if occasion arises. In Lowell public opinion seems to sustain the committee in its action as regards fraternities, for all pupils who have entered the school since the rule was made have signed the required agreement without objection, and there is no reason to suppose that any student has broken his word on this subject. While, therefore, existing fraternities have not been abolished they must soon cease by present limitations.

MEDICAL SUPERVISION.

To ensure healthful conditions at school and to conserve the health of pupils, nine physicians and a school visitor are employed. Each child is carefully examined at least once a year. For less extended examinations each school is visited once a week, or oftener if there is need. At these visits physicians sometimes go into school rooms and make at least a cursory examination of all pupils; oftener they see only children referred to them by the teacher. The majority so referred are found to be all right, and are promptly returned to their places in class. For those needing the services of a physician or special care in the home, a diagnosis and recommendation card is filled out by the doctor and sent to the parent. In cases where a pupil's condition requires immediate attention, or is such as to be a menace to his mates, a temporary exclusion follows. Such cases are few, and exclusions are rarely of long continuance. The regular cards have a return request written on the reverse side, with acknowledgment of receipt over the signature of the parent. In the fear, however, that the cards will not come back, the teacher keeps a duplicate. If the card secures due consideration for the child, the parent is probably grateful for its helpful information, and the teacher is certainly thankful for the result, as the child has also reason to be. Instances of this kind are gratifyingly frequent, but are far too few. If the card produces no good result the teacher adds her influence, writing letters, making calls, and inviting conferences at the school. If these efforts bear no fruit, and if the case is a serious one, the services of the school visitor are secured, and her explanations and persuasions are added. Success crowns the use of some or all these means in a majority of cases, though not in all, more's the pity. Sometime there will be a law to compel

parental attention in such cases. Now the only statute to be invoked is the one enforced by the agent of the Society for the Prevention of Cruelty to Children. In one case where the life of a child was believed to be in immediate danger this agent's aid was secured, with success.

During the year 2359 recommendations were made, and 1379 treatments were secured. This is a very brief and simple statement, but it covers a work rarely equaled under similar conditions, and one whose importance can hardly be over-estimated. Physicians have been faithful and efficient. They deserve, and they have, the confidence of the public, but, after all, the brunt of the battle comes on the teachers and the visitor. If they had been indifferent or unfaithful the astonishing total of treatments would be sadly reduced; that they have been active in unselfish service the figures just given are full proof.

Recommendations were for a full hundred ailments, varying from the simplest of childish ills to diseases as serious as tuberculosis, cancer, or at least a "cancerous growth," scarlet fever, and the like. Diseases of the throat and nasal passages, however, were so much more numerous than any other as to be in a class by themselves. Of laryngitis and pharyngitis there were only seven, and of nasal and post nasal obstruction only eight, but of hypertrophied tonsils there were no less than 756, of adenoids 244, and of tonsilitis 34, a total of 1049. Diseases of the eye and ear, not refraction or defective hearing, which, under statute, are matters of test by teachers rather than doctors, but actual diseases, were quite common. There were 38 cases of conjunctivitis, 16 of blepharitis, and enough more of several less common disorders to make a total of nearly 100. Of mastoiditis, or

purulent discharge from the ear, there were 16 cases, one so serious as to gravely imperil life, and of indurated cerumen there were 20.

Some diseases, like tuberculosis, are sure of attention because of extreme seriousness, and others, like scabies, compel treatment because the child must be cured to be in school. Of tuberculosis 21 cases were reported, all of which received treatment, and of scabies there were 14, all of which were cured. Adenoids and enlarged tonsils are not only the most numerous of reported diseases but they are the most difficult to reach. The treatment record, 96 for adenoids and 150 for tonsils, is, therefore, one of high credit to all concerned. Slight and easily curable diseases, like impetigo, 107 cases, and pediculosis, 385, swell the list most of all, but there were 25 treatments of tonsillitis, 32 of conjunctivitis, 12 of discharge from the ear, 54 of septic condition of one kind or another, and so on through a list far too long to be reported.

Most recommendations are due to discovery of ills not before recognized, but occasionally recommendations are made and treatments are secured for diseases or defects obvious to every one, but to which parents have given no attention until urged to do so by physician, teacher or nurse. Two cases of strabismus, two of cleft palate, and one of bent limbs are examples. The last, a very bad case, was treated at the Massachusetts General Hospital in Boston with entire success.

The list of cures is an imposing one, but cures, fine as they are, are but a part, and possibly the smaller part, of the far-reaching good accomplished by the hygiene and health work of the schools. Cleaner living and better sanitary conditions follow it as naturally as light supersedes darkness with the coming of the dawn. Testimony to improved conditions in the home is universal, amounting in some districts to a revolution.

The school visitor, or school nurse, as she would be called elsewhere, and is sometimes called in Lowell, has been very busy in most useful service. She visits schools continually, and has taken 212 children to hospitals or to physicians for examination and treatment. This number does not include 213 cases of pediculosis which she has either treated herself, or for which she has secured treatment by providing crude petroleum or visiting homes. The first number does include 46 adenoid and tonsil cases, or more than one a week, which she has taken to hospitals. She has taken 68 children to hospitals or specialists for examination and treatment of eyes, and has herself supplied glasses for 39. She secured admission to the tuberculosis camp for nine children, and has later had the pleasure of seeing one of these sent to a state sanatorium, where she is reported to be doing well. On her report two children have been taken in charge by the State Commission for the Blind, and are now receiving treatment in the orthopedic department of the Massachusetts General Hospital. She has investigated the cases of eight feeble-minded children, and has taken three of them to the School for the Feeble Minded at Waverly for examination, not to remain, unfortunately, because of lack of room in that most useful but sadly overcrowded institution. To persuade parents to give needed attention to the health of their children, or to obtain permission to do for children that which their parents could not or would not do, she has made 236 visits to homes. A volume of further details of interest must be omitted for lack of space.

SIGHT AND HEARING TESTS.

The annual sight and hearing tests were taken by teachers in the fall term, with the following results:—

	Pupils Exam- ined	Defective in Seeing	Per Cent Defective	Defective in Hearing	Per Cent. Defective	Parents Noti- fied
Primary Schools	3826	412	11	81	2	338
Grammar Schools	5520	643	11	196	4	554
High School	1263	259	20	17	1	72
Totals	10609	1314	12	294	3	964

Under the rules of the State Board of Education vision is tested by reading letters at a distance of 20 feet. The letters used, known as those of the Snellon Test, are a standard of measurement in this and most civilized countries. If the pupil can only read at 20 feet a letter large enough to be recognized by a person with normal eyes at 30 feet, his seeing power is said to be twenty-thirtieths, or two-thirds of normal vision. If at 20 feet he can only see a letter which should be seen at 40 feet, his seeing ability is rated at twenty-fortieths, or one-half. For the purposes of this report, children with two-thirds of normal vision are not counted as defective. The 1314 children who are so recorded are those with but one-half, or less, of full seeing power. If others with two-thirds power were included the number would be nearly doubled, and the per cent. of defectives would be raised from 12 to 20 or more. This is a very serious state of affairs, and deserves much more attention than it has ever received.

For a test of hearing there is no recognized standard. Most teachers depend on the voice, in a whisper or in low tones, and count those defective who can hear less well than their mates.

SCHOOL SAVINGS BANKS.

As was stated in 1909-10, the first school savings bank in Lowell was opened at the Varnum school in 1908. For this the master and teachers did all the work, though funds were deposited in a chartered institution. Late in 1909 two city banks, the Central and the Five Cent, offered to do the work for and at the schools, and in 1910 the offer was accepted by nine grammar and two primary schools. In 1911 all the other grammar schools and six more primary schools fell into line, making a total of 20. Of these, statistics to date are as follows:—

	Date of Opening	Pupils	Depositors	Bank Books	Deposits
Varnum	Nov. 1908	529	514	397	\$4491.65
Moody	Jan. 1910	395	352	274	2022.57
Pawtucket	Jan. 1910	257	239	178	882.67
Colburn	Jan. 1910	305	307	307	471.36
Riverside	Jan. 1910	184	144	144	486.21
Highland	Feb. 1910	497	339	288	2497.41
Greenhalge	Feb. 1910	336	297	297	2101.00
Laura E. Lee	Sept. 1910	231	138	90	265.70
Tenth St.	Sept. 1910	151	194	127	640.79
Green	Oct. 1910	440	499	224	1150.30
Lincoln	Nov. 1910	470	432	225	1331.68
Butler	Nov. 1910	657	474	325	878.69
Edson	Feb. 1911	475	304	174	1373.65
Washington	Sept. 1911	209	127	83	195.88
Howard St.	Sept. 1911	141	46	28	84.42
London St.	Sept. 1911	126	77	19	63.94
Bartlett	Oct. 1911	664	448	284	783.90
Franklin	Oct. 1911	135	42	18	32.85
Sycamore	Oct. 1911	79	46	27	52.18
High St.	Dec. 1911	164	49	11	19.38
		6445	5068	3522	\$19826.23

From the foregoing it appears that of 6445 pupils in schools which offer the opportunity to become depositors, 5068, or 79 per cent., avail themselves of the privilege.

This seems to demonstrate the popularity and the success of the system. It will be noted, too, that those schools which have had it longest have the largest proportion of depositors, the total average being much reduced by those which have had it but a short time. Deposits vary from the same cause, the average at the Varnum being \$8.74, while that of more recently opened accounts is much less, the average for the whole being \$3.91. Grammar schools, having older pupils, naturally have a larger proportion of depositors and a larger average of deposits than primary schools. The difference between depositors and the possessors of bank books is due to the fact that the Central Savings Bank does not give a book until the deposit reaches one dollar. That \$19,826 have already been saved is in itself a fine thing, of course, but this sum, large as it is for the time in which it has been accumulated, is of small consequence in comparison with the benefits which will undoubtedly follow the acquisition of the saving habit. The system is an unquestioned success and seems to have universal approval. The two banks which receive deposits do so at a very considerable expense, and if the ultimate result shall be to largely increase their number of profit-bringing depositors they will have well earned whatever rewards may come to them for the work they are now doing.

EVENING SCHOOLS.

As always, pupils in evening schools are composed of two distinct classes, one that can read and write in English and attends from choice; the other illiterate, at least in English, which comes to school under the compulsion of law. Until three years ago the latter class included all minors over sixteen years of age, that is, all persons between 16 and 21. The law of 1909 defined the

word minor as "person under 18 years of age," thus freeing from its requirements all between 18 and 21. This reduced evening school attendance in Lowell about 300. The legislature of 1911 restored its dictionary meaning to the word minor and thus raised the compulsory age to its former limit of 21. The result was to increase elementary evening school attendance 280. At the same time the opening of industrial evening schools reduced attendance at the evening High school 130.

Those pupils who gave up the evening High school for the industrial school abandoned a school offering four lessons a week for one which, if for boys, would give them two, and, if for girls, would give but one. This is not to say that their choice was an unwise one, but to suggest that, if desired, classes can and will be arranged to permit attendance at both, at the industrial one or two evenings a week and at the High the rest of the time.

Lowell has always been proud of her evening schools, and probably never with more reason than in 1911. Classes certainly were never better maintained in numbers or interest. Refusal to appoint extra teachers at the start precluded the necessity of early dismissals, always an injury to the school, and an automatic method of reducing force when necessary kept attendance at a satisfactory standard. Salaries were thus reduced from \$18,799 in 1910 to \$17,079 in 1911, and this despite a considerable increase in pupils. Nor does this reduction connote decreased efficiency. Quite the contrary is true, for, as probably every principal will agree, the largest classes are usually the best. This is partly because the best teachers hold the most pupils, but it is also because, in most cases, there is less interest in undersized classes.

Few pupils graduate from the elementary schools. This is partly because many of them begin with no knowledge of English, and in the time they attend they cannot

prepare for a higher school. In many more cases it is because the pupil prefers to remain in the elementary school rather than to go the long distance required to reach the High school. Most pupils of the Middlesex Village, Riverside and Butler schools, for instance, could easily pass the examination for the High school, but they do not do so because they prefer to remain where they are. The elementary schools graduated 58 pupils in 1911, a very creditable number under the circumstances.

At the evening drawing schools some arts and crafts courses proved of interest and increased attendance considerably in 1910-11, and a new class in decorative lettering proved popular in the fall of 1911. The machine and architectural classes did their usual good work with no change of teachers, and with average attendance of pupils. Very informal exercises of graduation were held at the school at the close of the term. Graduates numbered 19.

The evening High school had 82 graduates. Closing exercises were held in the school hall, which was packed to its capacity, as usual. A class picture, the "Castle of Chillon," was presented by John Henry Winters, president of the class, and accepted by Mr. E. T. Goward, chairman of the committee on evening schools. The principal address of the evening was by Charles A. Prosser, Deputy Commissioner of Education, and the diplomas were presented by His Honor Mayor Meehan. As usual, the parts taken by students were such as to do them and the school much credit, and no citizen could have been present without a feeling of satisfaction and pride in the school and in the system of schools of which it is the head.

Statistics of the last completed term of all the evening and evening drawing schools, with names of graduates, are as follows:

SUMMARY OF EVENING SCHOOL ATTENDANCE

For Term 1910-1911.

SCHOOLS	Number of Rooms in each School	Teachers at beginning of Term	Teachers at close of Term	WHOLE NUMBER ON TIME BOOKS			AVERAGE NUMBER BELONGING			AVERAGE ATTENDANCE			Per cent. of Attendance	Graduates	Minors unable to read and write
				Males	Females	Total	Males	Females	Total	Males	Females	Total			
High	32	31	29	639	563	1202	326	282	608	287	248	535	79	82	
Bartlett	3	13	5		140	140		92	92		79	79	86	4	79
Butler	3	6	3	66	38	104	37	28	65	28	13	41	70	9	3
Colburn	5	7	6	132	39	171	70	36	106	55	28	83	78	3	12
Cheever St.	2	4	2		60	60		35	35		33	33	94		16
Edson	7	7	5	144	52	196	70	42	112	62	31	93	83	6	33
Franklin	5	8	4	158	42	200	58	20	78	45	12	57	73	10	
Green	4	8	4	234		234	69		69	61		61	88	4	121
Greenhalge	2	3	2	48	33	81	27	19	46	23	16	39	85	11	7
Mann	9	18	10	359		359	258		258	199		199	77		128
Old Moody	4	5	4	71	60	131	42	37	79	29	32	61	77	9	91
Mdsx. Vill.	1	1	1	22	7	29	12	3	15	9	3	12	80		
Riverside	1	3	2	50	19	69	27	14	41	24	12	36	88	2	3
Worthen St.	4	6	5	169		169	100		100	84		84	84		47
Totals	82	120	82	2092	1053	3145	1096	608	1704	906	507	1413	82	140	540

EVENING HIGH SCHOOL GRADUATES, 1911

Regular Course

Berberian, Harry Jasper	Anderson, Gertrude Jane
Boland, Edward Stephen	Broderick, Elleen Mary
Brick, Edward Thomas	Connolly, Rosella Theresa
Chaphel, Joshua Mark	Cowdell, Sarah
Cullen, George Henry	Daley, Mary Gertrude
Cowgill, George	Dolan, Catherine Cecilia
Crowe, John Valentine	Earle, Ruth Russell
Davidson, Robert Joseph	Ecklund, Grace
Delmore, Thomas Aloysius	Fitzgerald, Ellen Gertrude
Fitzgerald, James Patrick	Fraizer, Mary Etta
Flannery, Patrick Francis	Gill, Annie Louise
Ford, Thomas Leo	Gillick, Anna Sarah
Garrity, Peter Francis	Hunter, Ruth Christina
Graham, John Richard	Haggart, Anna Isabelle
Hurley, John Joseph	Leahy, Ella Mary
Johnson, Leonard Carl	Lee, Mary Agnes
Keene, George Herbert	Lynch, Mary E.
Kelliher, John Patrick	McAllister, Jennie Veronica
Kirrane, James Edward	Montgomery, Rose Vericunda
McCarthy, Stephen Henry	Muldoon, Katherine Gertrude
McGrath, Daniel Joseph	Mullen, Delia Matilda
McIntyre, Archibald	Murray, Etta Elizabeth
McKelvey, George	Nelson, Mary Catherine
O'Brien, Dennis Patrick	O'Brien, Mary Elizabeth
O'Grady, John Patrick	Palm, Anna Josephine
Phelps, John Lester	Perron, Emela Alma
Reilly, Wilfred Edward	Powers, Helen Veronica
Reynolds, Thomas Aloysius	Rochette, Helena Mary Ann
Roll, Edward Louis	Rynne, Mary Agnes
Ronan, John James	Sheahan, Catherine E.
Sadlier, Fred Aloysius	Smith, Marion M.
Sheffield, Thomas Joseph	Steele, Mabel Etta
Shugro, John Joseph	Swanson, Hannah
Thibault, Henry Leo	Tarpey, Margaret Frances
Trudel, Frank Joseph	Walworth, Catherine Gertrude
Tully, John James	Ward, Dora Mary
Winters, John Henry	Wooley, Esther Frances

Stenography Course

Hagstrom, Joseph Gustavus	Egan, Mary Frances
Riley, Joseph Aloysius	Lyng, Alice Irene
Cowdrey, Alice Marion	Mawn, Josephine Esther
Dodge, Irene Evelyn	Tobin, Mary Agnes

EVENING DRAWING SCHOOL.

Term of 1910-1911.

CLASSES	ROOMS	Teachers at opening, of Term			WHOLE NUMBER ON TIME BOOK			AVERAGE NUMBER BELONGING			AVERAGE ATTENDANCE			Percent of Attendance
		Teachers at opening, of Term	Teachers at opening, of Term	Teachers at opening, of Term	Males	Females	Total	Males	Females	Total	Males	Females	Total	
Mechanical	2	7	5		80		80	66		66	57		57	86
Architectural	1	3	2		48		48	37		37	25		25	68
Free-Hand	4	7	7		140	76	216	83	69	152	66	53	119	78
Totals	7	17	14		268	76	344	186	69	255	148	53	201	78

EVENING DRAWING SCHOOL GRADUATES 1911

Machine Class

Joseph John Higginbottom
 Hugh Patrick Leonard
 Charles Sidney Amadon
 John William Anderson
 Gustaf Anderson
 Sidney Suttle Hayes
 George Mark O'Malley
 Ragmar Albion Pearson
 Forrest Albert Mills
 Albert Wiggs Nelson

Free-Hand

Walter Burnette
 Wallace Croscup
 Henry Laroie
 Frank McCann
 Roy Richardson

Architectural Class

Edgar W. Derman
 Harry C. Fletcher
 David W. Whittet

Modeling

Herbert Walker

HOURS OF SESSIONS AND "NO SCHOOL" BELL.

By recent vote of the school committee the afternoon sessions of the elementary schools will begin at 1:45 o'clock and close at 3:45 throughout the year. Morning sessions remain 8:30 to 11:30 as heretofore. In stormy weather the signal for the omission of a session will be sounded on the fire alarm bells one hour before the time for opening the session, that is at 7:30 a. m. and 12:45 p. m.

In the school year 1910-11 sessions of school were omitted five times, equivalent to two and one-half days, on account of stormy weather, and in the calendar year 1911 six sessions were omitted. Whether these were too few or too many is for the public to decide, for certainly the school committee and its agent have no other desire than to meet the wishes of parents in this matter.

In conclusion I wish again to put on record my appreciation of the continued support of the school committee, and of the ability and fidelity of the teachers, truant officers and all with whom I have had to do. In the last few weeks of the year especially the cordial support that has been given me by all teachers, and the evidences of good will that have been shown me, have evoked a gratitude far greater than I have words to express.

Respectfully submitted,

Arthur K. Whitcomb,
Superintendent of Schools.

REPORT OF THE TRUANT COMMISSIONERS FOR THE YEAR 1911.

	Total number cases investigated	Absentees	Truants	Wandering about the streets	Visited second time	Visited third time	Violating the rules of school	Arrested	Sent to the Middlesex County Training School	Placed on Probation	Prosecution of Parents	Working certificates issued—(14 to 16 yrs. of age)	Working certificates approved—over 16 yrs. of age
January	290	250	40	50	27	3	0	2	0	2	0	116	20
February	210	192	18	33	15	2	0	2	2	0	1	104	19
March	212	192	20	47	17	3	0	3	3	0	0	107	8
April	198	170	28	44	20	2	0	2	2	0	0	117	19
May	326	269	57	98	23	5	0	4	4	0	0	172	25
June	166	131	35	41	19	1	0	1	1	0	0	130	20
July												274	21
August												199	32
September												184	39
October	383	324	59	52	19	4	0	2	2	0	0	203	68
November	222	187	35	20	26	1	0	5	4	1	0	98	32
December	169	143	26	38	21	2	0	1	1	0	0	99	65
Totals	2176	1858	308	423	187	23	0	22	19	3	1	1803	368

Number of cases of contagious diseases reported to the School Department for the year ending December 31, 1911.

Diphtheria	94	Scarlet Fever	151
Measles	68	Membranous Croup	2
Cerebro Spinal Meningitis	8	Infantile Paralysis	11

Roll of Teachers

Giving Name, Subject or Grade Taught, Residence,
Date of Election and Salary

HIGH SCHOOL

Kirk and Anne Sts.

CYRUS W. IRISH, Headmaster, 308 Nesmith street...	1885	\$3000
CARL D. BURTT, Submaster and Head of Department of Languages, Clark road.....	1895	2000
FREDERICK R. WOODWARD, 168 Sixth street, Head of the Department of Mathematics.....	1895	2000
MARY A. WEBSTER, First Assistant, 45 Varney street, English and Mathematics.....	1859	1000
SUSIE L. D. WATSON, 390 East Merrimack street, United States History and Mathematics.....	1885	1000
ADELAIDE BAKER, 136 Myrtle street, French.....	1885	1000
JENNIE L. ALLEN, 947 Middlesex street, Physics and Physiology	1885	1000
EMMA L. BRADLEY, 485 Westford street, French...	1890	1000
GERTRUDE A. RODLIFF, Chelmsford, Mass., History and English	1890	1000
MARIETTA CASSIDY, 4 Fifth avenue, Latin and Algebra	1890	1000
GEORGIANA F. VINTON, 52 Fourth street, History, English and Algebra.....	1872	1000
GRACE M. GOODHUE, 120 School street, Ancient His- tory and Latin.....	1893	900
BESSIE E. HUNTOON, 64 Warwick street, French and Physiology	1894	900
THOS. F. FISHER, 305 East Merrimack street, Manual Training	1898	1600
MARY G. STEVENS, 27 Nesmith street, English and History	1900	900
MARY H. KILLPARTRICK, 609 Stevens street, Eng- lish and Commercial Geography.....	1901	900
MARGARET V. SPEAR, 576 Westford street, French and English	1902	800
ETHEL M. EVERETT, 12 Belmont street, English and History	1905	800

ELIZABETH H. MURPHY, 159 White street, French and English	1905	800
ALICE RICHARDSON, 213 Branch street, Algebra...	1905	800
ALBERT D. MACK, 16 Rutland street, Shorthand...	1906	1500
WM. W. DENNETT, 55 Eighteenth street, Chemistry and Physics	1906	1200
ERNEST M. HUNT, 314 Pine street, Bookkeeping.....	1907	1500
ALICE H. BACHELLER, 195 Nesmith street, English and Commercial Law.....	1908	800
LILLIAN E. EDGERLY, 27 Anne street, Bookkeeping.	1909	800
ELMER G. BRENNAN, 107 Warwick street, French and English	1910	1000
RAYMOND W. SHERBURNE, Tyngsboro, Mass., Greek and Latin.....	1910	1000
GRACE D. DONOVAN, 256 Branch street, English....	1908	700
EDITH B. KELLEY, 100 Fort Hill avenue, English....	1908	700
JAMES A. SHANLEY, 364 Lawrence street, Book-keeping	1910	800
MARIE R. SULLIVAN, 105 Crawford street, Short-hand	1911	700
CHARLES E. SEEDE, 85 Dover, Manual Training....	1911	800
FLORENCE R. FOOTE, 28 Wannalancit street, History and English.....	1910	700
M. ALICE MATHER, 112 Fort Hill avenue, French and Commercial Law	1910	700
SUSAN F. BURBANK, 130 Bowers street, Latin and Algebra	1910	700
CAROLINE WESCOTT, Y. W. C. A., John street, Education and Physical Culture.....	1911	650
ARTHUR W. TRUBEY, North Chelmsford, Manual Training	1911	1000
MILLIE A. SEVERANCE, 302 Stevens street, Physics	1911	650
VIOLET STOCKS, 141 Park View avenue, Geometry, Geology and Astronomy	1911	650
CAPT. COLBY T. KITTREDGE, 81 Mt. Vernon street, Military Instructor	1901	500
FORDYCE COBURN, M. D., Wyman's Exchange, Medical Director	1905	200
ALICE QUEENIE MANCHESTER, Secretary, 66 Willow street	1912	500

BARTLETT SCHOOL

Wannalancit Street

HERBERT D. BIXBY, Master, 19 Rutland street.....	1908	\$1800
BELLE A. PRESCOTT, gr. 9, 68 Mt. Washington street	1878	700
BLANCHE A. CHENEY, gr. 9, 383 Walker street	1896	700
FRANCES CLARK, gr. 8, Chelmsford, Mass.....	1899	700
AMY L. TUCKE, gr. 8, 111 Butterfield street.....	1880	700
ALICE D. SUNBURY, gr. 7, 142 Wilder street.....	1899	700
KATHLEEN E. DRISCOLL, gr. 7, 47 Grace street,...	1911	650
BELLE F. BATCHELDER, gr. 6, 66 Arlington street..	1883	700
SARA E. AMES, gr. 6, 418 Walker street.....	1902	650
MARIA W. ROBERTS, gr. 5, 571 Westford street....	1875	700
KATHERINE F. FARLEY, gr. 5, 12 Robert street....	1907	700
IVAH M. CONNELL, gr. 4, 660 School street.....	1910	650
A. GERTRUDE STILES, gr. 4, 72 Varney street.....	1895	700
LILLIAN E. ALISTER, 15 Stavely street.....	1911	650

Primary Department

BRIDGET K. SMITH, gr. 3, 117 Stackpole street.....	1904	\$ 650
BERTHA M. SHERBURNE, grs. 3 and 2, Tyngsboro, Mass.	1911	650
ELEANOR J. LELACHEUR, gr. 2, 130 Avon street...	1910	650
ESSIE E. ROCHE, gr. 1, 1835 Middlesex street.....	1903	650
E. BELLE PERHAM, gr. 1, 90 Riverside street.....	1893	700

MORRILL SCHOOL

Common and Adams Streets

ANNA M. COURTNEY, Prin., gr. 2, 196 Pawtucket street	1887	\$ 750
AGNES T. COURTNEY, gr. 3, 11 Marsh street.....	1891	700
MARY T. WHELLEY, gr. 1, 254 Park View avenue...	1897	700

CROSS STREET SCHOOL

Cross Street between Fletcher and Mt. Vernon Streets

SARAH E. SCALES, Principal, gr. 3, 14 Porter street	1866	\$ 750
ELLEN M. WHITE, gr. 2, 1057 Middlesex street.....	1863	700
KATHERINE KELLY, gr. 1, 24 Columbus avenue....	1893	700

BUTLER GRAMMAR SCHOOL

Gorham Street

CORNELIUS F. CALLAHAN, Master, 549 Westford street	1885	\$2200
NELLIE F. MURPHY, gr. 9, 85 Sherman street.....	1878	700
MARGUERITE J. CRONIN, gr. 9, 228 Plain street....	1900	700
MARY E. LANE, gr. 8, Billerica, Mass.....	1894	700
SADIE E. TULLY, gr. 8, 105 Westford street.....	1897	700
DELIA T. BRADY, gr. 7, 183 Chapel street.....	1883	700
KATHERINE E. KELLEY, gr. 7, 201 Appleton street	1883	700
ALICE C. O'BRIEN, gr. 7, 300 Wilder street.....	1897	700
MARY L. CROWLEY, gr. 6, 201 Appleton street.....	1902	650
HELEN L. CLARK, gr. 6, 297 East Merrimack street..	1908	650
ANNIE J. DEVINE, gr. 5, 128 Carlisle street.....	1901	700
MARY L. McSORLEY, gr. 5, 40 Huntington street....	1879	700
ETTA G. BURNS, gr. 5, 329 Concord street.....	1901	700
KATHARINE M. USHER, gr. 4, 465 Parker street....	1895	700
KATHERINE M. JANTZEN, gr. 4, 3 Olive street....	1902	650
MARGARET G. HYDE, gr. 4, 5 Floyd street.....	1902	650
MARY G. QUINN, gr. 4, 28 Chapel street.....	1906	650

LYON STREET SCHOOL

Corner Lyon and Central Streets

ALICE T. LEE, Principal, gr. 3, 12 South Walker st.	1878	\$ 750
MARY E. CASSIDY, gr. 2, 44 B street.....	1908	650
MARY J. McCARRY, gr. 1, 1600 Gorham street.....	1881	700
LORETTA A. HANNAFIN, gr. 1, 15 Sargent street...	1910	650
ELLEN F. LYNCH, gr. 2 and 1, 11 Salem street.....	1910	650

CARTER STREET SCHOOL

Carter Street

ISABELLA T. VINALL, Principal, gr. 3, 1 Glidden avenue	1873	\$ 750
MARGARET J. CONNORS, gr. 2, 48 Walnut street...	1894	700
KATHERINE F. BRADY, gr. 2, 173 Chapel street....	1897	700
MARY V. JOHNSON, gr. 1, 183 Wilder street.....	1897	700
DELIA C. MALONEY, gr. 1, 70 Elm street.....	1901	700

AGAWAM STREET SCHOOL

Agawam and Barrington Streets

MARY A. FAY, Principal, gr. 3, 115 Stackpole street..	1889	\$ 750
ANNA M. HIGGINS, gr. 2, North Billerica.....	1910	650
EUGENIE V. FRAPPIER, gr. 1, 26 Hampshire street	1910	650

LONDON STREET SCHOOL

Corner of London and West Streets

ELIZABETH R. MAGUIRE, Principal, gr. 3, 132 Agawam street	1884	\$ 750
MARGARET L. HAGERTY, gr. 1 and 2, 31 Royal st.	1908	650
MARY F. HILL, gr. 1 and 2, 94 Midland street.....	1887	700
RUTH CROWELL, gr. 3, 71 Fort Hill avenue.....	1911	650

WEED STREET SCHOOL

Corner of Weed and Gorham Streets

LILLA M. McEVOY, Principal, gr. 3, 214 Pawtucket st.	1893	\$ 750
MARY E. CROWLEY, gr. 2, 436 Lincoln street.....	1905	650
MARY F. DEVINE, gr. 1, 1527 Gorham street.....	1902	650

COLBURN GRAMMAR SCHOOL

Lawrence Street, near Charles

HELEN M. SHEAN, Principal, 169 Fort Hill avenue..	1891	\$1000
MARGARET C. FOX, gr. 9, 8 Eddy street.....	1900	700
ANNA T. McCARRON, gr. 8, 228 High street.....	1910	650
LENA COLLINS, gr. 7, 1106 Mammoth road, Collinsville	1911	650
JULIA M. DRISCOLL, gr. 6, 47 Grace street.....	1911	650
FRANCES L. DONOVAN, gr. 6, 168 Shaw street.....	1911	650
MARY J. MOYNAHAN, gr. 5, 216 High street.....	1911	650
LOUISE C. THOMAS, gr. 5, 40 West Sixth.....	1911	650
SADIE A. CONNOR, gr. 4, 73 Pleasant street.....	1911	650
ELIZABETH A. CONWAY, gr. 4, 219 Church street...	1911	650

COLBURN PRIMARY SCHOOL

Charles Street, near Lawrence

ELLEN M. HOLDEN, Principal, gr. 3, 2191 Lakeview avenue	1876	\$ 750
NELLIE F. DAVIDSON, gr. 2, 559 Fletcher street....	1891	700
CLOTILDA A. DELANY, 791 Broadway.....	1910	650
KATHERINE M. TOBIN, gr. 1, 40 Linden street.....	1910	650

CENTRAL STREET SCHOOL

Central Street, opp. Hudson

ELIZA COWLEY, Principal, gr. 3, 484 Rogers street..	1857	\$ 750
ELIZABETH G. LAWLER, gr. 2, 260 High street.....	1897	700
ANNA T. COBURN, gr. 2, 39 Arlington street.....	1904	650
HELEN A. DRURY, gr. 1, 44 Walnut street.....	1897	700

AMES STREET SCHOOL

Corner Lawrence and Ames Streets

MARY E. DREW, Principal, gr. 2, 36 Wamesit street..	1868	\$ 750
KATE F. MURPHY, gr. 3, 870 Gorham street.....	1885	700
EDITH FARRINGTON, gr. 1, 182 Perry street.....	1905	650

EDSON GRAMMAR SCHOOL

Highland Street

CALVIN W. BURBANK, Master, 130 Bowers street..	1872	\$2200
FRANCES M. WEBSTER, gr. 9, 45 Varney street....	1873	700
ROSALIE T. BURNS, gr. 8, 39 Whitehead avenue....	1878	700
ANNIE E. DONOVAN, gr. 7 and 8, 26 Madison street	1895	700
KATE J. HAYES, gr. 6 and 7, 15 Floyd street.....	1879	700
MARGIE F. MARREN, gr. 6, 86 Rolfe street.....	1886	700
SARAH J. CROSBY, gr. 5, 12 Simpson place.....	1868	700
JENNIE E. ROGERS, gr. 5, 418 Walker street.....	1904	650
JULIA B. RIORDAN, gr. 4, 58 Second avenue.....	1897	700
MARIANNA L. DONOVAN, gr. 4, 256 Branch street..	1911	650
MARY C. TIMMONS, gr. 4, 1164 Middlesex street....	1911	650

CHARLES STREET SCHOOL

Charles Street, between Gorham and Chapel Streets

ALICE T. OWENS, Principal, gr. 3, 4 Belmont street..	1878	\$ 750
ELLA E. GARDNER, gr. 1 and 2, 246 Appleton street	1871	700
MARION A. STEVENS, gr. 1 and 2, 465 Westford st.	1908	650
MARGARET A. HARRAHAN, gr. 1, 32 Marshall st.	1882	700

COTTAGE STREET SCHOOL

Corner Cottage and Chapel Streets

ROSE E. MacVEY, Principal, gr. 2, 46 Linden street..	1887	\$ 750
ANNIE L. MURPHY, gr. 3, 870 Gorham street.....	1901	700
E. LAURA MOORE, gr. 1, 21 Kimball avenue.....	1905	650

ELIOT SCHOOL

Corner Favor and Summer Streets

ELLEN A. STILLINGS, Principal, gr. 1 and 2, 24 Bellevue street	1875	\$ 750
ELLEN A. CORBETT, gr. 3, 32 Highland street.....	1878	700
NELLIE T. O'GRADY, gr. 2, 623 Central street.....	1881	700
LOYOLA McCANN, gr. 1, 17 Wentworth avenue.....	1893	700

GREEN GRAMMAR SCHOOL

Merrimack Street

ALBERT L. BACHELLER, Master, 195 Nesmith street	1874	\$2200
RUTH B. BAILEY, gr. 9, 18 Loring street.....	1871	700
CLARA A. HANNAFORD, gr. 8, 142 Wilder street...	1869	700
LIZZIE A. NOLAN, gr. 7, 214 Pawtucket street.....	1876	700
FLORENCE E. ARCHIBALD, gr. 7, Y. W. C. A., John street	1911	650
JENNIE E. FAY, gr. 6, 115 Stackpole street.....	1891	700
HANNAH M. BARROWS, gr. 6, 19 Newhall street....	1908	650
CATHERINE F. McCARTHY, gr. 5, 647 Market street	1889	700
SADIE F. McCORT, gr. 5, 15 Center street.....	1901	700
ELLA J. CARLETON, gr. 4, 1072 Bridge street.....	1882	700
ANNIE T. DELAY, gr. 4, 87 Mt. Washington street...	1900	700
ELIZABETH PROVENCHER, gr. 4, 523 Fletcher st.	1908	650

KIRK STREET SCHOOL

Corner Kirk and Lee Streets

ELIZA A. DAVIS, Principal, gr. 2 and 3, Billerica, Mass.	1881	\$ 725
LAURA H. PALMER, grs. 1 and 2, 35 Thirteenth street	1882	700

CABOT STREET SCHOOL

Corner Cabot and Ford Streets

IDA J. CLARKE, Principal, gr. 2 and 3, 166 Branch street	1887	750
EUGENIA L. HOGAN, gr. 2, 106 Avon street.....	1889	700
MARY J. MURPHY, gr. 1, 34 Butterfield street.....	1887	700

WORTHEN STREET SCHOOL

Worthen Street, between Market Street and Broadway

ESTHER V. GREEN, Principal, gr. 2, 434 Westford st	1889	\$ 750
MARY R. MARREN, gr. 3, 86 Rolfe street.....	1890	700
MARY E. MEEHAN, gr. 1, 228 Worthen street.....	1891	700

GREENHALGE GRAMMAR SCHOOL

Ennell Street, Centralville

FREDERICK A. WOOD, Master, 295 Pawtucket street	1906	\$2000
MARY E. TOBIN, gr. 9, 40 Linden street.....	1906	650
MARY ALICE COCHRANE, gr. 7, 230 Cabot street...	1911	650
LEONA M. SMALL, gr. 6, 46 Whitney avenue.....	1911	650
MARY R. SEERY, gr. 6, 237 Tenth street.....	1911	650
JOSEPHINE S. DUNLAVY, gr. 5, 22 Lagrange street	1908	650
ALICE A. MASTERSON, gr. 5, 352 Christian street...	1892	700
ANNIE L. MAHONEY, gr. 4, 41 Butterfield street....	1906	650
HELEN KOHAWN, gr. 4, 63 Thirteenth street.....	1877	700

GREENHALGE PRIMARY

MARTHA ROGERS, gr. 3, 131 Cumberland road	1895	\$ 700
M. JOSEPHINE DONEHUE, gr. 2, 891 Bridge street..	1900	700
BLANCHE E. MARSHALL, gr. 1, 48 Marginal street..	1908	650

LAKEVIEW AVENUE SCHOOL

Lakeview Avenue, Centralville

MARGARET J. McCLUSKEY, gr. 3, 246 Methuen st.	1890	\$ 750
ALICE E. RAMSAY, gr. 2, 124 Third street.....	1906	650
ANNA F. JOYCE, gr. 1, 22 Twelfth street....	1906	650
ANNIE E. IRVING, gr. 1, 82 Stone street, Dracut, Mass.	1908	650

HIGHLAND GRAMMAR SCHOOL

Pine Street

CHARLES W. MOREY, Master, 14 Belmont street....	1880	\$2200
ESTELLE L. WHITNEY, gr. 9, 13 Oakland street....	1885	700
MARY F. FOSS, gr. 9, 248 Foster street.....	1891	700
ABBIE F. WOODWARD, gr. 8, 157 Dartmouth street	1869	700
ANNA T. COFFEY, gr. 8, 182 Wilder street.....	1910	650
LEONORA K. BATTLES, gr. 7, 21 Chester street....	1895	700
ANNA A. BURNHAM, gr. 7, 14 Belmont street.....	1894	700
LUELLA A. WARDWELL, gr. 6, 13 Oakland street...	1870	700
MINNIE C. GRAY, gr. 6, 106 Liberty street.....	1890	700
GRACE R. SANDERS, gr. 5, 67 South Loring street...	1897	700
LULU TURNER, gr. 5, 33 Warwick street.....	1900	700
GRACE F. WARD, gr. 5, 201 Appleton street.....	1893	700
C. ETHEL HALE, gr. 4, 15 Robbins street.....	1906	650
MABEL E. BROWN, gr. 4, 172 Branch street.....	1901	700
ARVILLA L. READER, gr. 4, 216 Appleton street....	1871	700

FRANKLIN SCHOOL

Corner Branch and Middlesex Streets

SARAH C. FISKE, Principal, gr. 3, 246 Appleton st.	1866	\$ 750
MARY E. RICHARDSON, gr. 2, 55 Liberty street....	1910	650
MARION J. STEVENSON, gr. 1 and 2, 63 Princeton st.	1878	700
KATE G. JONES, gr. 1, 240 Jewett street.....	1880	700

PINE STREET SCHOOL

Corner Pine and Gibson Streets

CARRIE J. BAILEY, Principal, gr. 3, 16 Loring street	1884	\$ 750
GRACE I. WASHBURN, gr. 2, 233 Westford street...	1897	700
HELEN D. SWAIN, gr. 1, 413 Walker street.....	1904	650

DOVER STREET SCHOOL

Dover Street, between Middlesex and Grove Streets

CLARA B. HORNE, Principal, gr. 3, 106 Chestnut st.	1877	\$ 750
CLEMENTINE H. BOWERS, gr. 2, 18 Loring street..	1876	700
BERTHA GARDNER, gr. 1, 32 Robbins street.....	1887	700

MIDDLESEX VILLAGE SCHOOL

Middlesex Street, corner Cornell Street

HARRIET F. WAKEFIELD, Principal, gr. 5 and 6, 497 School street.....	1889	\$ 750
KATHERINE G. EGAN, grs. 3 and 4, 17 Princeton st.	1904	650
GERTRUDE E. DANE, gr. 1 and 2, 234 Gibson street..	1905	650

POWELL STREET SCHOOL

Powell Street, near Liberty Street

VIOLA A. HAMBLETT, Principal, gr. 1 and 2, 58 Bellevue street	1876	\$ 725
ELLEN J. PIPER, gr. 2 and 3, 55 Norcross street.....	1894	700

ABRAHAM LINCOLN GRAMMAR SCHOOL

Chelmsford Street

JAMES L. MELLEN, Master, 74 Pentucket avenue....	1893	\$2200
MARGARET M. SPARKS, gr. 9, 169 Fort Hill avenue	1894	700
GRACE SCRIBNER, gr. 8, 190 Liberty street.....	1893	700
BRIDE T. SWEENEY, gr. 7 and 8, 138 Pleasant street	1900	700
IRMA V. HODGMAN, gr. 7, 632 Westford street.....	1897	700
ESTHER M. DOWNING, gr. 6, 434 Westford street..	1904	650
MARGARET T. DONOVAN, gr. 6, 42 Clare street....	1911	650
MARGARET G. McDONALD, gr. 5, 397 Broadway....	1904	650
MYRTLE M. KILLPARTRICK, gr. 5, 609 Stevens st.	1911	650
ELLA E. PRESCOTT, gr. 4, 681 Aiken street, Dracut..	1894	700
ELLEN L. FLOYD, gr. 4, 124 Stevens street.....	1887	700
JULIA G. SLATTERY, gr. 4, 65 Arlington street....	1911	650

Primaries in Lincoln School Building

ELSIE M. PUFFER, gr. 1, 942 Middlesex street.....	1901	700
LILLIAN A. STROUT, gr. 1, 95 So. Loring street....	1906	650

LAURA E. LEE SCHOOL

Corner Plain and Powell Streets

FLORA H. SPRAGUE, Principal, gr. 3, 589 School st.	1882	\$ 750
LENA M. ROBINSON, gr. 2 and 3, 68 So. Walker st.	1898	700
LILLA M. STANLEY, gr. 2, 2 Horn street.....	1897	700
SADIE M. DEANE, gr. 1 and 2, 17 Loring street.....	1902	650
MINNIE E. COBURN, gr. 1, 157 Smith street.....	1910	650

HOWARD STREET SCHOOL

Howard Street, between Chelmsford and Hale Streets.

MARION E. GREENE, Principal, gr. 3, 96 Pine street	1884	\$ 750
MARGARET S. JAMIESON, gr. 2, 112 Shaw street...	1904	650

GRAND STREET SCHOOL

Grand Street, between Westford and Middlesex Streets

JENNIE M. BENNETT, gr. 2 and 3, 2 Bellevue street	1885	\$ 700
CHARLOTTE A. PARSONS, gr. 1, 485 Westford street	1910	650

MOODY GRAMMAR SCHOOL

Corner High and Rogers Streets

WILLIAM S. GREENE, Master, 302 Nesmith street..	1883	\$2200
NELLIE C. MAHONEY, gr. 9, 17 North street.....	1898	700
IDA L. SAMUELS, gr. 9, 56 Fifth avenue.....	1898	700
BERTHA M. ROWLANDSON, gr. 8, 11 Holyrood ave.	1891	700
ELLA M. BREEN, gr. 7, 23 Marsh street.....	1893	700
MARTINA F. McMAHON, gr. 7, 33 Mead street.....	1905	650
FLORA A. OWEN, gr. 6, 42 Huntington street.....	1900	700
ANASTASIA E. DOWNING, gr. 6, 434 Westford st.	1908	650
FRANCES E. HARDMAN, gr. 5, 18 Astor street.....	1873	700
FRANCES E. GARRITY, gr. 5, 61 Twelfth street.....	1874	700
CORA E. JONES, gr. 4, Y. W. C. A., John street.....	1910	650
EDITH T. SANBORN, gr. 4, 260 Mansur street.....	1911	650

POND AND HIGH STREET SCHOOL

High Street, Belvidere

CLARA A. EMERSON, Principal, gr. 2, 216 Appleton street	1869	\$ 750
GERTRUDE SEEDE, gr. 3, 85 Dover street.....	1900	650
MARY I. HALLORAN, gr. 2, 546 East Merrimack st.	1908	650
ADELAIDE CROWLEY, gr. 1, 115 Fort Hill avenue..	1894	700
MAUDE E. GREEN, gr. 1, 238 East Merrimack street	1900	700

SYCAMORE STREET SCHOOL

Sycamore Street

FLORENCE E. ROWELL, Principal, gr. 2 and 3, 60 Porter terrace	1900	\$ 725
ELIZABETH B. DAME, gr. 1 and 2, 178 First street..	1902	650

PAWTUCKET GRAMMAR SCHOOL

Mammoth Road, Pawtucketville

WILLIAM P. BARRY, Master, 1280 Middlesex street	1887	\$2200
ELLEN M. MacDONALD, gr. 9, 214 Pawtucket street	1878	700
M. ISABELLA PHELPS, gr. 8, 50 Lamb street.....	1908	650
ELIZABETH G. COMMON, gr. 7, 109 Beech street....	1911	650
CHARLOTTE C. WALSH, gr. 6, 76 Mt. Vernon street	1902	650
GOLDIE M. GARDNER, gr. 5, 15 Columbus avenue...	1898	700
CORINNA G. COVER, gr. 4, 16 Lombard street.....	1901	700

NEW MOODY STREET SCHOOL

New Moody Street

ADDIE B. MERRILL, Principal, gr. 3, 465 Bridge st.	1892	\$750
GRACE C. DELANY, gr. 2 and 3, 791 Broadway.....	1900	700
ANNA I. CASSIDY, gr. 2, 4 Fifth avenue.....	1902	650
KATHARINE P. O'BRIAN, gr. 2, West Adams street	1911	650
MARY E. SNOW, gr. 1, 89 School street.....	1901	700
MAUDE M. HARDY, gr. 1, 171 Walker street.....	1901	700

LEXINGTON AVENUE SCHOOL

CARRIE M. HART, 16 Varney street.....	1887	\$ 725
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RIVERSIDE GRAMMAR SCHOOL

Woburn Street, Wigginvile

HARRIET L. WHEELER, Principal, gr. 7 and 8, 64 Morton street	1900	\$ 900
ELIZABETH A. GILINSON, gr. 5 and 6, 250 Plain st.	1910	650
FRANCES J. CUNNINGHAM, gr. 4, 517 Rogers street	1906	650

RIVERSIDE PRIMARY SCHOOL

CHRISTINE M. KANE, gr. 3, 339 High street.....	1908	\$ 650
ETTA M. SMITH, gr. 2, 1118 Lawrence street.....	1906	650
CHARLOTTE O. LOWE, gr. 1, North Chelmsford, Mass.	1910	650

VARNUM GRAMMAR SCHOOL

Myrtle Street, Centralville

(Telephone 2326)

HENRY H. HARRIS, Master, 93 Eleventh street.....	1893	\$2200
ELIZABETH C. KENNEDY, gr. 9, 106 Durant street	1884	700
MARY F. WING, gr. 9, 3 Myrtle street.....	1879	700
AGNES BAILEY, gr. 8, 53 Third street.....	1900	700
DAISY B. MacBRAYNE, gr. 8, 24 Beech street.....	1900	700
GRACE W. BALCH, gr. 7, 117 Third street.....	1894	700
ANNIE V. DONOGHUE, gr. 7, 24 South Loring street	1904	650
MARY A. FAY, gr. 6, 303 Tenth street.....	1898	700
AGNES T. FAY, gr. 6, 303 Tenth street.....	1891	700
ROSE A. DOWD, gr. 6, 237 Tenth street.....	1884	700
GRACE M. THURBER, gr. 6, 52 Fourth street.....	1910	650
ALICE R. KEESE, gr. 5, 107 Warwick street.....	1881	700
ADA E. HOOLE, gr. 5, 173 Warren street.....	1894	700
MARGARET F. HOWE, gr. 4, 208 South street.....	1900	700
JULIA WILLIAMS, gr. 4, 156 Sixth street.....	1886	700
MABEL A. METCALF, gr. 4, 93 Vernon street.....	1908	650

WEST SIXTH STREET SCHOOL

West Sixth Street, between Coburn and Jewett Streets, Centralville.

STELLA J. ALLEN, Principal, gr. 3, 115 Third street	1879	\$ 750
ELIZABETH F. LAMERE, gr. 2, 63 Canton street....	1887	700
MARION S. KEYES, gr. 1 and 2, 102 Third street....	1888	700
MARY J. CALLAHAN, gr. 1, 117 Durant street.....	1895	700

TENTH STREET SCHOOL

Corner Tenth and Varnum Streets, Centralville

MARY F. BEANE, Principal, gr. 3, 212 Tenth street..	1879	\$ 750
FANNIE H. MURPHY, gr. 2, 42 Twelfth street.....	1889	700
ALICE A. HOLTHAM, gr. 1 and 2, 1107 Bridge street	1887	700
ELLA A. BAILEY, gr. 1, 205 Tenth street.....	1869	700

BILLINGS STREET SCHOOL

ANNIE M. ROBBINS, Principal, gr. 3, 62 Twelfth st.	1895	\$ 750
ETTA FOYE, gr. 2, 127 Durant street.....	1901	700
ELIZABETH H. SEEDE, gr. 1, 85 Dover street.....	1906	650
ALICE O. STICKNEY, gr. 1, 599 School street.....	1910	650

WASHINGTON GRAMMAR SCHOOL

Lang Street, opposite Inland

JOHN E. BARR, Master, 178 First street.....	1906	\$1500
HELEN A. DOW, gr. 9, 149 B street.....	1905	650
SUSAN C. GRIFFIN, gr. 8, 580 School street.....	1906	650
ESTHER M. GREENE, gr. 7, 179 Warwick street....	1906	650
ALICE G. MCGILLY, gr. 6, 149 Concord street.....	1911	650
LAURA F. GREENE, gr. 5, 179 Warwick street.....	1911	650
OLIVE J. PALM, gr. 4, 255 Plain street.....	1911	650

KINDERGARTENS**AGAWAM STREET**

SARAH G. SPARKS, Principal, 59 Elm street.....	1894	\$ 550
KATHARINE M. CROWLEY, 115 Fort Hill avenue..	1908	500

BARTLETT

HELEN W. NOYES, Principal, 49 Nesmith street....	1896	550
EDITH A. ANDREWS, 77 Fort Hill avenue.....	1897	500

CHARLES STREET

MABEL D. NICKERSON, Principal, 136 Chestnut st.	1893	550
S. ALICE KNAPP, 336 East Merrimaek street.....	1899	500

CHAPEL STREET

MARIETTA G. GORMLEY, Principal, 22 Lyon street..	1895	550
KATHERINE C. EARLY, 181 Pleasant street.....	1896	500

DOVER STREET

ELIZABETH A. WILSON, Principal, 15 South Canton street	1893	550
ELLA M. PENN, 262 London street.....	1901	500

FRANKLIN

N. GRACE TAYLOR, Principal, 11 Ware street.....	1895	550
EVA CRAVEN, temp., 218 Stevens street		

LAURA E. LEE

EDITH A. HOWITT, Principal, 52 Myrtle street.....	1897	550
ALICE F. SEETON, 158 Mammoth road.....	1901	500

LINCOLN

GERTRUDE A. ROBERTS, 74 Stevens street.....	1897	500
GERTRUDE B. CROWLEY, 115 Fort Hill avenue....	1909	500

MOODY

MARY C. WALKER, Principal, 100 Appleton street..	1893	550
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PAWTUCKET

MARIETTA KING, Principal, 205 Stackpole street...	1895	550
S. HORTENSE TABOR, 82 Riverside street.....	1896	500

PINE STREET

LOUIE I. SMITH, Principal, 11 Edson street.....	1895	550
HELEN S. LIVINGSTON, temp., 28 Robbins street		

VARNUM

NETTIE M. CONANT, Principal, 198 Third street....	1892	550
CLARA M. EVERETT, 75 Beacon street.....	1896	500

ROLL OF TEACHERS**79****SCHOOL VISITOR**

ALICE M. FRENCH, Y. W. C. A., John street..... 1909 650

SUPERVISOR OF KINDERGARTENS

ANNA W. DEVEREAUX, Tel. 2261-1, 14 Park street 1893 500

MUSICAL DIRECTOR

FREDERICK O. BLUNT, Tel. 3511, 21 Bellevue street 1898 1250

ASSISTANT IN MUSIC

JESSIE M. HAGAR, Tel. 1804-3, 237 Branch street... 1911 800

SUPERVISORS OF DRAWING

OLIVE E. UNDERHILL, 117 Branch street..... 1887 750

ADDIE E. EDWARDS, Tel. 1128-1, 57 Pine street.... 1907 750

TEACHER OF SEWING

IDA J. FLINT, Tel. 2641-2, 200 Liberty street..... 1880 900

SUPERVISOR OF MANUAL TRAINING

MABEL W. EWINGS, 3 Astor street..... 1891 900

INDUSTRIAL SCHOOL

Old Bartlett School Building, Clark Street, Tel. 2932

WILLIAM H. DOOLEY, Principal, 67 Burt street.... 1911 \$2500

HARLAND E. MILLER, 11 Robbins street, Assistant
to Mr. Dooley..... 1911 500

WILLIAM A. WEBB, 76 Branch street, Instructor in
Machine Shop Practice and Blacksmithing..... 1911 1200

WALTER F. CONNOLLY, 84 School street, Assistant
in Machine Shop and English..... 1911 750

FRED F. WIGGIN, 710 Stevens street, Instructor in
Carpentry 1911 900

CLARENCE E. LESUER, 16 Midland street, Instructor
in Electricity and Automobile Repairing..... 1911 800

HERBERT L. CARRAGHER, 365 Beacon street, As-
sistant in Electricity..... 1911 700

GIRLS' DEPARTMENT

Morrill School Building, Common Street

ALICE L. GOOKIN, 824 Rogers street, Academic		
Branches	1911	800
RUBERTA BRAMHALL, 84 Tenth st., Housekeeping	1911	800
ANNA M. O'DAY, 599 Central street, Dressmaking...	1911	650

ABSENT ON LEAVE

Helen M. Lambert, High School, '97, 283 Pawtucket street.
 Ethel W. Whitcomb, High School, '03, Box 620 Manila, P. I.
 Mary A. Balch, Edson, '65, Topsfield, Mass.
 Alice B. Besse, New Moody, '91, 581 Rogers street.
 Esther G. Donlan, Green, '97, L. I. Hospital, Boston Harbor.
 Grace E. Frye, Greenhalge, '10, North Salem, N. H.
 Lena A. Gookin, Green, '80, Keene, N. H.
 Joanna V. Hoar, Butler, '01, Convent, N. J.
 Fannie G. Hobbs, unassigned, '10, Minneapolis, Minn.
 Helen M. Whitcomb, unassigned, '11, Needham, Mass.
 May E. P. Lowney, unassigned, '10, 40 Crowley street
 Lizzie F. Lowe, Franklin, '57, 13 Nichols street
 Helen J. O'Hearn, Lincoln, '00, 649 Westford street
 Hortense M. Lamere, Franklin Kin., '95, 6 West Eleventh
 Elsie M. Cragin, Lincoln Kin., '95, Roxbury, Mass.

PERMANENT SUBSTITUTES

Delia F. Briscoe, R. F. D. No. 3 Dracut.
 Carrie L. Brown, 18 Bourne street.
 Irene E. Gauthier, 67 Fifth street.
 Emma M. Graham, 419 Chelmsford street.
 Vera E. Groves, 53 Thirteenth street.
 Gertrude B. McQuade, 225 Summer street.
 Annie L. McKissock, 9 Third street.
 Mary Alice McCue, 781 Broadway.
 Mary L. Martin, 547 Gorham street.
 Martha R. Taylor, 146 Sixth street.

ANNUAL REPORT
OF THE
CITY AUDITOR

RELATING TO THE

Appropriations, Receipts
and Payments

For the Year Beginning January 1, 1911 and
Ending December 31, 1911

ALSO

GENERAL INFORMATION



CITY OF LOWELL

MASSACHUSETTS

PRINTED BY
C. I. HOOD COMPANY
LOWELL, MASS.

Commissioners elected for the year 1912 under the new form of
Commission government, Acts of 1911.

MAYOR, JAMES E. O'DONNELL, Commissioner of Public Safety.

ALDERMAN, JAMES E. DONNELLY, Commissioner of Finance.

ALDERMAN, GEORGE H. BROWN, Commissioner of Streets and
Highways.

ALDERMAN, ANDREW E. BARRETT, Commissioner of Water
Works and Fire Protection.

ALDERMAN, LAWRENCE CUMMINGS, Commissioner of Public
Property and Licenses.

THE CITY COUNCIL OF 1911.

Mayor

JOHN F. MEEHAN.

Aldermen

ANDREW E. BARRETT HERCULE A. TOUPIN

JAMES A. BURNS ALEXANDER E. ROUNTREE

JEREMIAH F. CONNORS JOSEPH H. JODOIN

JOHN W. DALEY JAMES F. FLANNAGAN

JAMES J. GALLAGHER, Chairman

Councilmen

GEORGE H. ALLARD THOMAS J. CORBETT

ROBERT S. FULTON BERNARD J. TRACY

HARRY C. TAYLOR HENRY ACHIN, JR.

JOHN J. BRADY CHARLES A. DELORANDE

DENNIS MAHONEY CHARLES B. ROGERS

GARRETT G. ROYAL THOMAS CHADWICK

ADELARD BERARD WILLIAM L. CROWLEY

ALBERT G. CHENEY ARTHUR GENEST

WILLIAM T. DAVIS JOSEPH W. BOWERS

JOHN J. COUGHLIN ORRIN B. RANDLETT

THOMAS DONOHUE HERBERT L. CHAPMAN

WILLIAM J. GARGAN JOHN JACOB ROGERS

FRANCIS A. CONNOR HARRY A. WHITTET

HERBERT E. ELLIOTT, President

City of Lowell, Massachusetts

Lowell is situated at the confluence of the Merrimack and Concord Rivers.

Was originally a part of Chelmsford.

Incorporated as a Town in 1826.

Incorporated as a City in 1836.

Part of Tewksbury was annexed in 1834, 1874, 1898, 1906.

Part of Dracut was annexed in 1851, 1874, 1879.

Part of Chelmsford was annexed in 1874.

Population 1911, 106,294.

Has 139.79 miles accepted streets, 62.50 miles unaccepted.

Has 107.71 miles of sewers, costing \$6,378,126.04.

Has an area of 14.1 square miles.

Assessed valuation \$82,772,900.00, and 26,426 assessed polls.

Tax rate, \$18.90 per \$1000.00, per cent. of valuation 100.

Bonded indebtedness \$4,182,075.80, sinking funds \$1,018,386.41.

Net bonded indebtedness, \$2,463,689.39.

City Hall and Memorial Building costing \$450,000.

School Department—63 buildings costing \$2,000,000.00, 340 teachers, 14,000 scholars.

Fire Department—14 buildings, 6 engines, 4 hook and ladder trucks, 1 auto combination truck, 2 chemicals, 12 hose wagons, 144 alarm boxes, 133 miles wire, 190 officers and men.

Police Department—1 station, 1 auto patrol, 2 patrol wagons, 155 officers and men, 68 signal boxes.

Water Department—Daily capacity 14,000,000 gallons; 145.30 miles mains; 1251 fire hydrants; reservoir capacity 5 days supply; consumes 5,442,967 daily; all water used is from driven well system.

Park Department—142,322 acres of parks and playgrounds valued at \$688,272.00

Has Five National Banks, Two Trust Companies. Capital and Surplus, \$2,186,700.00.

Has Eight Savings Banks, deposits of \$31,259,452.00, over 71,000 depositors.

Has Three Co-operative Banks, \$1,300,678.38, 3500 members.

Develops about 30,000 h. p. daily by means of 6½ miles of canals which furnish power for manufacturing plants.

Has 16½ miles of waterways.

Has the largest cotton mill, largest hosiery, largest leather factory, largest carpet mill, largest mohair mill, largest magneto factory, largest sail-cloth factory and largest proprietary medicine plant in the United States.

Has the greatest Textile School in the world.

Has more than 1000 manufacturing plants.

Report of the City Auditor

To the Honorable, the Municipal Council,

Gentlemen:—

As required by the charter and ordinances I have the honor to submit the annual report, showing the financial transaction of the City of Lowell for the year beginning January 1, 1911, and ending December 31, 1911, also much other information of interest to the general public.

Respectfully submitted,

CHAS. D. PAIGE,

Auditor of Accounts.

Lowell, Mass., March 15, 1912.

City Auditor's Report

For the Year Ending December 31, 1911

SCHEDULE C

General Treasury Fund Receipts and Payments for the Year Consolidated

Cash Balance January 1, 1911		\$ 200,589.15
Receipts to Gen. Treasury		
Fund	\$4,026,922.56	
Temporary Accounts.....	<u>1,281,095.69</u>	
Cash receipts omitting duplications		<u>\$2,745,826.87</u>
Payments from Gen. Treasury Fund	\$4,073,195.26	
Temporary Accounts	<u>1,281,095.69</u>	
Cash Payments omitting duplications		<u>\$2,791,099.57</u>
		<u>46,272.70</u>
Cash Balance Dec. 31, 1911..		\$ 154,316.45

**RECEIPTS AND PAYMENTS OF THE CURRENT YEAR (1911)
NOT INCLUDING RECEIPTS OR PAYMENTS ON
ACCOUNT OF LOANS**

General Treasury Receipts—

They include only the earning of the city applying to the current year 1911.

General Treasury Payments—

They include only the actual expense of the city applying to the current year 1911.

General Treasury Receipts collected for 1911 accounts		\$1,957,979.55
Uncollected Revenue of 1911 accounts, due January 1, 1912:		
Taxes	\$ 410,975.76	
Other Assessments	21,588.58	
	<u> </u>	432,564.34
Total Receipts collected and uncollected (1911 accounts).....		<u>\$2,390,543.89</u>
Payments of 1911 from Receipts.....		\$2,483,872.65
Receipts of 1911.....		<u>2,390,543.89</u>
Excess of Payments over Expense of current year		<u>\$ 93,328.76</u>

GENERAL TREASURY FUND OVERDRAFT OF 1911

Excess of Payments over Expense of Current year		\$ 93,328.76
Loans made by City Council during year to apply to overdrafts.....	\$ 49,365.00	
Other revenue applied to make up overdrafts	11,868.75	
	<u> </u>	61,173.75
Actual overdraft authorized paid from the General Treasury Fund by vote of the City Council December 14th, 1911....		<u>\$ 32,155.01</u>

SCHEDULE B**City Debt 1912**

Total City Debt January 1, 1912.....	\$4,182,075.80
Deduct:	
Water Works Loan, Acts 1871.....	\$1,167,500.00
City Hall Loan, Acts 1890.....	450,000.00
High School Loan, Acts 1890.....	150,000.00
New Schools Loan, Acts 1896.....	200,000.00
Temporary Loan	700,000.00
	<u>2,667,500.00</u>
City Debt as it relates to limit of indebtedness	<u>\$1,514,575.80</u>

CITY DEBT AND SINKING FUNDS

Ordinary City Debt, January 1, 1911.....	\$2,271,290.00
Borrowed during the year 1911.....	312,450.00
	<u>\$2,583,740.00</u>
Total	269,164.20
Paid during the year 1911.....	<u>\$2,314,575.80</u>
Total Ordinary City Debt, Dec. 31, 1911	
	<u>\$1,151,200.00</u>
Water Works Debt, January 1, 1911.....	100,000.00
Borrowed during the year 1911.....	
	<u>\$1,251,200.00</u>
Total	83,700.00
Paid during the year 1911.....	<u>\$1,167,500.00</u>
Total Water Works Debt, Dec. 31, 1911	
	<u>\$2,314,575.80</u>
City Debt, December 31, 1911.....	1,167,500.00
Water Debt. December 31, 1911.....	
	<u>\$3,482,075.80</u>
Gross Debt	
	<u>\$2,314,575.80</u>
Ordinary City Debt, December 31, 1911..	436,031.80
Sinking Funds	
	<u>\$1,878,544.00</u>
Net Ordinary City Debt.....	
	<u>\$1,167,500.00</u>
Water Works Debt, December 31, 1911...	582,354.61
Sinking Funds	
	<u>\$ 585,145.39</u>
Net Water Debt.....	

City Debt:—Continued

Net City Debt, December 31, 1911:

City	\$1,878,544.00
Water	585,145.39
Total Net Debt.....	<u>\$2,463,689.39</u>

LIMIT OF INDEBTEDNESS FOR THE YEAR 1912

Total City Debt, January 1, 1912.....	\$4,182,075.80
Deduct:	
Water Works Loan.....	\$1,167,500.00
City Hall.....	450,000.00
High School.....	150,000.00
New Schools.....	200,000.00
Temporary Loan	700,000.00
	<u>2,667,500.00</u>
City Debt as it relates to limit of indebtedness	<u>\$1,514,575.80</u>
Limit of Municipal Debt for the year 1912, 2½ per cent. of the average valuation for the past three years...	\$2,001,664.95
City Debt as it relates to limit of indebtedness	<u>\$1,514,575.80</u>
Distance from the Debt Limit, Jan. 1, 1912	\$ 487,089.15

SCHEDULE D

Receipts and Payments of the Financial Year Classified

	Receipts	Payments
* Operation and Maintenance.....	\$2,255,625.30	\$2,397,888.64
† New Construction.....	412,450.00	316,670.72
Total Cash proceedings for the year..	\$2,668,075.30	\$2,714,559.36
‡ Trust Funds, Cemetery.....	2,751.57	2,540.21
§ Temporary Accounts.....	1,356,095.69	1,356,095.69
Total proceedings for the year.....	\$4,026,922.56	\$4,073,195.26

* *Operation and Maintenance* relate only to the General Treasury Fund Revenue and Payments, and do not include receipts and payments on account of loans or permanent construction.

† *Construction* relates only to General Treasury Fund Loans receipts and payments, and for permanent construction.

‡ *Trust Funds* include receipts and payments for specified purposes in which the City only acts as trustee.

§ *Temporary Accounts* are simply Journal items (duplications), receipts and payments which are temporarily held and paid out again, and show the same amounts in both receipts and payments.

TEMPORARY ACCOUNTS

	Receipts	Payments
Temporary Tax Loans.....	\$1,200,000.00	\$1,200,000.00
General Treasury Fund Transfers.....	81,095.69	81,095.69
Rebates and Refunds.....	1,356.10	1,356.10
Sinking Fund—Water Works.....	75,000.00	75,000.00
	\$1,357,451.79	\$1,357,451.79

SCHEDULE E

General Treasury Receipts

Tax Revenue:

1902	\$	2.00	
1906		14.78	
1907		6.00	
1908		177.89	
1909		169,377.10	
1910		199,393.21	
1911		1,199,768.18	
		<hr/>	\$1,568,739.16

Loan Revenue:

Sewer Construction	\$	50,000.00	
Paving Streets		75,000.00	
Paving Streets		6,500.00	
Macadamizing Streets		35,000.00	
Shedd Playground		10,000.00	
Race Street Fire House Imp.....		20,000.00	
Department Repairs and Expenses.....		14,000.00	
School and Fire House Imp.....		6,500.00	
Repairing and Painting Bridges.....		17,000.00	
New Streets		3,750.00	
Paving Streets		2,700.00	
Building Improvements		3,000.00	
Sewer Construction		20,000.00	
Department Expenses		35,000.00	
Schools and Cemetery.....		12,000.00	
Fire Dept. Auto.....		2,000.00	
		<hr/>	\$ 312,450.00

Department Revenue:

Buildings	\$	2,547.00	
Charity Hospital		1,783.96	
Charity, Out Door Rel.....		4,360.09	
Cemeteries		10,141.33	
City Clerk		1,999.15	
City Sealer		590.20	
City Treasurer		967.52	
City Weigher		50.20	
Corporation Tax		132,762.54	
Excise Tax		6,467.20	
Fire Department		342.25	
Health Department		6,467.86	
City Council Fund.....		3,868.03	
Milk Inspector		294.50	
Interest		35,433.17	
Liquor Licenses		139,757.00	
Military Aid		20,538.00	
Moths		4,007.26	
National Bank Tax.....		3,811.44	

Department Revenue:—Continued

Parks	1,136.00	
Police	14,105.56	
Schools	6,915.01	
Sewer Construction	14,356.51	
Streets	9,086.19	
Street Railway Tax.....	11,848.92	
Watering Streets	18,770.12	
Miscellaneous	961.17	
Sinking Fund (W-W).....	11,808.73	
	<hr/>	\$ 465,176.91
Total General Treasury Fund Revenue...		\$2,346,366.07

Other Revenue:

Temporary Loans	\$1,200,000.00	
Transfers	81,095.69	
Overdrafts	756.82	
Water Department	223,703.98	
Water Department Loan.....	100,000.00	
Sinking Fund (Water Works).....	75,000.00	
	<hr/>	1,680,556.49
		<hr/>
		\$4,026,922.56

General Treasury Fund Payments

Department Accounts (see report).....	\$2,404,911.00	
Temporary Loans	1,200,000.00	
Transfers	81,095.69	
Water Department	387,188.57	
	<hr/>	4,073,195.26
Cash Balance, December 31, 1911.....	154,316.45	
		<hr/>
		\$4,146,416.02

Loans Made in 1911

Sewer Construction	\$ 50,000.00
Paving Streets	75,000.00
Paving Streets	6,500.00
Macadamizing Streets	35,000.00
Shedd Playground	10,000.00
Race Street Fire House Imp.	20,000.00
Department Repairs and Expenses.....	14,000.00
School and Fire House Imp.	6,500.00
Repairing and Painting Bridges.....	17,000.00
Water Dept., New Wells and Reservoir.....	100,000.00
New Streets	3,750.00
Paving Streets	2,700.00
Building Improvements	3,000.00
Sewer Construction	20,000.00
Department Expenses	35,000.00
Schools and Cemetery.....	12,000.00
Fire Dept. Auto.....	2,000.00
	<hr/>
	\$ 412,450.00

SCHEDULE F

RECEIPTS AND PAYMENTS FOR THE CURRENT YEAR

Revenue Receipts and Payments—Non-Revenue Receipts and Payments Grouped According to Functions Showing the Actual Receipts and Payments of Each Department.

	Revenue		Non-Revenue	
	Receipts	Payments	Receipts	Payments
1. Departmental.	11,079.93	\$ 117,105.12		
2. Protection of Life & Property	18,017.88	372,926.03		\$ 25,799.83
3. Health and Sanitation ..	24,809.41	94,551.98		52,100.54
4. Highways & Bridges	71,212.72	339,852.37		132,649.43
5. Charities	15,948.61	107,901.47		
6. Soldiers' Benefits	20,577.00	40,720.35		
7. Education ...	15,463.46	458,103.83		4,965.00
8. Recreation ...	1,450.33	25,334.59		14,147.59
9. Unclassified .		3,414.50		
10. Public Service Enterprises .	299,019.59	304,999.46		82,999.27
11. Cemeteries ..	12,892.90	8,729.70		2,500.00
12. Interest, Indebtedness, Sinking Funds	47,190.33	166,986.67	\$1,612,450.00	1,471,864.20
13. Taxes, Licenses, Permits..	1,876,810.40	244,187.23		
14. Refunds		1,356.10		
	\$2,414,472.56	\$2,286,169.40	\$1,612,450.00	\$1,787,025.86

SCHEDULE F

Receipts and Payments divided as follows:

Receipts and Payments of Revenue

Receipts and Payments including those of Loans and Bonds
grouped according to functions.

1. DEPARTMENTAL

	RECEIPTS		PAYMENTS	
	Revenue for Expenses	Non Revenue	Expenses	Non Revenue
City Council.....			\$ 1,928.43	
Mayor			5,083.55	
Auditor			6,462.34	
Treasurer	\$ 957.52		12,723.28	
Assessors			15,344.65	
City Clerk.....	47.29		6,805.16	
Messenger .....	.55		18,568.31	
Law			6,558.24	
Clerk of Council.....			300.00	
Clerk of Committees.....			1,586.40	
Elections	50.00		9,465.71	
Registrars			5,172.74	
State Supervisors.....	5.00		125.00	
Engineer	10,018.52		16,008.00	
Supply	1.05		6,874.26	
Insurance			3,883.91	
Municipal Registers.....			215.14	
New Hall—Contingent Fund				
	\$11,079.93		\$117,105.12	

SCHEDULE F—Continued

2. PROTECTION OF LIFE AND PROPERTY

	RECEIPTS		PAYMENTS	
	Revenue for Expenses	Non Revenue	Expenses	Non Revenue
Police Department:				
Commissioners	\$ 4.25		\$ 3,200.00	
Salaries—Wages	2,203.75		139,820.02	
Horses and Care.....			667.72	
Fuel—Light			1,305.30	
Equipment and Repairs.			1,082.11	3,729.49
Auto and Repairs.....			350.54	
Pensions			8,259.72	
Police Court Fines.....	6,752.31			
Sale of Material.....	465.25			
Rent of Court Room....	2,400.00			
Miscellaneous Expense..	13.00		1,891.44	
Fire Department:				
Salaries—Wages			144,523.87	
Horses and Care.....			16,317.88	
Fuel—Light			6,074.55	
Hydrant Service.....			539.32	
Equipment and Repairs.			3,493.08	4,634.89
Auto—Repairs			1,183.77	2,000.00
Pensions			2,286.40	
New Buildings.....				14,166.93
Sale of Material.....	342.25			
Miscellaneous Expenses..			2,381.98	
Rifle Range.....			924.00	1,268.52
Inspector of Buildings...	1,239.61		23,565.41	
Inspector of Wires.....			2,524.29	
Sealer	590.20		2,724.71	
Moth and Beetle.....	4,007.26		8,675.12	
Care of Trees.....			1,000.00	
Fish Warden.....			40.00	
Pound Keeper.....			5.00	
Smoke Inspector.....			89.80	
	\$18,017.88		\$372,926.03	25,799.83

SCHEDULE F—Continued

3. HEALTH AND SANITATION

	RECEIPTS		PAYMENTS	
	Revenue for Expenses	Non Revenue	Expenses	Non Revenue
Health:				
Administration	\$ 1.35		\$10,616.00	
Other Expenses.....	245.87		3,949.63	
Contagious Diseases.....	294.50		3,486.77	
Milk and Vinegar.....			2,534.66	
Animals and Provisions.			523.25	
Sanitation:				
Sewer Maintenance.....	2,893.61		20,553.83	
Sewer Construction.....	14,397.71			52,100.54
Refuse and Garbage.....			52,038.91	
Sale and Use of Material	6,807.40			
Miscellaneous	1.92			
Reimbursements	167.05			
City Hospital (Contagious Fund).....			48.93	
School Inspection.....			800.00	
	\$24,809.41		\$94,551.92	52,100.54

4. HIGHWAYS AND BRIDGES

Street Department:				
Administration			\$ 4,008.89	
Yard Maintenance.....			17,105.80	
Construction Streets....			31,989.13	
Repairing Streets.....	\$ 13.50		35,000.47	
New Paving.....				73,238.00
Macadamizing				29,408.31
Cleaning Streets.....	21,029.94		46,601.30	
Watering Streets.....	8,902.37		20,890.30	
Sidewalks and Curbing..			6,918.25	
Snow Removal.....	30.63		5,340.17	
Bride Repairs, etc.....	41,168.34			30,003.12
Sale and Use of Material	47.94			
Miscellaneous				
Other Expenses.....	20.00		68,984.59	
Street Lighting.....			100,334.12	
State Highway Tax.....			115.00	
Grade Crossings.....			2,564.35	
	\$71,212.72		\$339,852.37	132,649.43

SCHEDULE F—Continued

5. CHARITIES

	RECEIPTS		PAYMENTS	
	Revenue for Expenses	Non Revenue	Expenses	Non Revenue
Out Door Relief:				
Salaries—Wages	\$ 34.00		\$ 9,136.67	
Ambulance			3,130.78	
Supplies and Medicine..	1,357.58		30,384.98	
Hospital Maintenance....	8.00		62,890.56	
Hospital Improvements...			2,358.48	
Reimbursements:				
Almshouse	525.71			
From Cities and Towns..	1,834.24			
From State.....	3,517.18			
From Other Sources....	8,671.90			
	\$15,948.61		\$107,901.47	

6. SOLDIERS' BENEFITS

Administration	\$17,729.00		\$ 2,074.45	
State Aid.....	1,578.00		16,903.00	
Military Aid.....	1,270.00		3,238.00	
Soldiers' Relief.....			17,306.90	
Soldiers' Burials.....			1,198.00	
	\$20,577.00		\$40,720.35	

SCHEDULE F—Continued

7. EDUCATION

	RECEIPTS		PAYMENTS	
	Revenue for Expenses	Non Revenue	Expenses	Non Revenue
Administration			\$ 3,000.00	
Salaries			12,875.61	
Other Expenses.....	\$ 96.62		23,419.22	
Teachers:				
Day School.....			241,241.98	
Evening School.....			14,453.25	
Kindergartens			12,301.13	
Manual Training.....			4,415.41	
Text Books, etc.....			13,771.49	
Janitor Service.....			50,950.06	
Fuel and Light.....			21,272.12	
Board of Truants.....			4,025.13	
Furniture and Furnish- ings			244.34	
Repairs and Improve ments	8,226.66		32,634.09	
New Buildings—Addi- tions				
Reimbursements	225.17			
Tuition	6,915.01			
Textile School.....			8,000.00	
Library & Reading Rooms				
Salaries			10,323.49	
Books, etc.....			2,308.86	
Lighting			950.33	
Binding			1,033.40	
Miscellaneous			883.92	
	\$15,463.56		\$458,103.83	

SCHEDULE F—Continued

8. RECREATION

	RECEIPTS		PAYMENTS	
	Revenue for Expenses	Non Revenue	Expenses	Non Revenue
Supervision				
Parks and Gardens:				
Wages	\$ 15.33		\$10,316.93	
Improvements and Addi- tions	299.00			
Other Expenses.....			4,884.11	
Rentals	1,136.00			
Playgrounds			2,904.11	14,147.59
Celebrations				
Memorial Day.....			1,315.14	
Band Concerts.....			677.43	
Fourth of July.....			1,602.70	
Baltimore March.....			21,00.17	
Labor Day.....			999.00	
Columbus Day.....			500.00	
	\$1,450.33		\$25,334.59	14,147.59

9. UNCLASSIFIED

Claims			\$2,814.50	
Portraits			600.00	
			\$3,414.50	

SCHEDULE F—Continued

10. PUBLIC SERVICE ENTERPRISES

	RECEIPTS		PAYMENTS	
	Revenue for Expenses	Non Revenue	Expenses	Non Revenue
Water Works:				
Maintenance—Operation			\$144,015.93	
New Construction.....			25,749.47	23,218.99
New Pump.....	\$ 265.41			59,780.28
Bonds and Notes Paid from Earnings.....			8,700.00	
Interest on Loans.....	1,955.44		46,314.12	
Other Expenses.....	29.80			
Income Sale of Water...	221,718.74			
Sinking Funds.....	75,000.00		75,000.00	
Miscellaneous			4,409.78	
Public Scales.....	50.20		810.16	
	\$299,019.59		\$304,999.46	82,999.27

11. CEMETERIES

Supervision:				
Wages			\$5,562.02	
Other Expenses.....			3,167.68	25,000.00
Sale of Lots.....	\$ 3,402.00			
Care of Lots.....	4,458.33			
Interments and Foundations	2,281.00			
Income—Perpetual Care.	2,751.57			
	\$12,892.90		\$8,729.70	25,000.00

SCHEDULE F—Continued

12. INTEREST—INDEBTEDNESS—SINKING FUNDS

	RECEIPTS		PAYMENTS	
	Revenue for Expenses	Non Revenue	Expenses	Non Revenue
Interest:				
Temporary Tax Loans..			49,809.30	
Loans, General Purposes			86,677.37	
Trust Funds.....				
Perpetual Care.....			2,540.21	
From Taxes.....	\$22,319.40			
From Bank Deposits....	10,362.00			
Indebtedness:				
Temporary Tax Loans..		1200000.00		1200000.00
Highways		139950.00		69493.50
Schools		18500.00		51800.00
Sewers		70000.00		46370.00
Water		100000.00		2700.00
Buildings		37000.00		27586.00
Other		47000.00		73914.70
Sinking Funds:				
Gen. Tax Levy—Build- ings			14,500.00	
Gen. Tax Levy—Water Works			16,000.00	
High Service.....	11,808.73			
City Debt:				
From Water Works.....	2,700.00			
	47,190.33	1612450.00	169,526.88	1471864.20

SCHEDULE F—Continued

13. TAXES—LICENSES—PERMITS

	RECEIPTS		PAYMENTS	
	Revenue for Expenses	Non Revenue	Expenses	Non Revenue
Taxes:				
Current Year.....	1,199,768.18			
Previous Years.....	368,970.98			
Street Railroad:				
State	11,848.92			
City	6,467.20			
All Other:				
Corporation	132,762.54		89.14	
National Bank.....	3,811.44		11,353.67	
State			120,725.00	
County			77,079.42	
Licenses:				
Liquor	139,703.00		34,940.00	
Druggist	54.00			
Fish	81.00			
Auctioneers	62.00			
Dog	3,868.03			
Business	5,604.81			
Junk	261.00			
Others	479.30			
Permits:				
Amusements	1,408.00			
Marriage	1,041.00			
Pool and Bowling.....	619.00			
	1,876,810.40		244,187.23	

14. REFUNDS

Taxes after Payment....			\$ 128.83	
Moth and Beetle.....				
Tax Titles.....			1,223.36	
Street Watering.....			3.91	
			\$1,356.10	

SCHEDULE G—RECAPITULATION OF SCHEDULE

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
1 Departmental	617.65	106769.04	1000.00	10018.52	59.85	118465.06	117105.12	974.53	385.41
2 Protection Life and erty	56708.00	372719.15	24150.00	3281.23	19.38	456877.76	398725.86	1100.29	57051.61
3 Health and Sanitation	1000.00	84633.43	76400.00	3497.99	192.55	165723.97	146652.52	179.72	18891.73
4 Highways & Bridges..	20137.86	273830.28	162760.00	43044.32	292.09	500064.55	469937.45	3792.89	26334.21
5 Charities		98008.43		9762.56	42.00	107902.99	107901.47	1.52	
6 Soldiers' Benefits.....		41330.90			39.00	41369.90	40720.35	649.55	
7 Education		419240.55	35505.00	8226.66	96.62	463068.83	463068.83		
8 Recreation	6239.66	25657.95	10000.00	299.00	15.33	42211.94	39482.18	637.69	2092.07
9 Unclassified	200.00	3414.50				3614.50	3414.50		200.00
10 Public Service Enter- prises	3517.63	2777.85	159514.87	265.41	298703.98	464779.74	387998.73		76781.01
11 Cemeteries	2500.00	8094.70	635.00			11229.70	11229.70		
12 Interest, Municipal Indebtedness, Sink- ing Funds.....	700000.00	439664.20		27.00	1200000.00	2342364.20	1638850.87	3513.33	700000.00
13 Agency Trust Invest- ments		256289.28				256289.28	246751.58	9537.70	
14 Refunds		1356.10				1356.10	1356.10		
	790920.80	2133876.36	469964.87	81095.69	1499460.80	4975318.52	4073195.26	20387.22	881736.04

SCHEDULE G—Continued

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
1—Departmental									
City Council Fund.....		1928.43				1928.43	1928.43		
Mayor, S.....		42000.00				4200.00	4200.00		
Mayor, O. E.....		883.55				883.55	883.55		
Auditor, S.....		41000.00				4100.00	4100.00		
Auditor, O. E.....		2362.34				2362.34	2362.34		
Treasurer, S.....		9004.00				9004.00	9004.00		
Treasurer, O. E.....		3719.28				3719.28	3719.28		
Assessors, S.....		12776.85				12776.85	12776.85		
Assessors, O. E.....		2567.80				2567.80	2567.80		
City Clerk, S.....		5552.00				5552.00	5552.00		
City Clerk, O. E.....		1270.00			3.25	1273.25	1253.16	20.09	
Messenger, S.....		10682.94				10682.94	10682.94		
Messenger, O. E.....		8000.00			.55	8000.55	7885.37	115.18	
Law, S.....		4826.00				4826.00	4826.00		
Law, O. E.....	350.00	500.00				1850.00	1732.24		117.76
Clerk of Common Council		300.00				300.00	300.00		
Clerk of Committees, S..		1400.00	1000.00			1400.00	1400.00		
Clerk of Committees, O. E.....		200.00				200.00	186.40	13.60	
Elections		10080.00				5172.74	5172.74		
Registrars		5172.74			50.00	10130.00	9465.71	664.29	
State Supervisors.....		120.00			5.00	125.00	125.00		
Engineering		6000.00		10018.52		16018.52	16008.00	10.52	
Supply, S.....		5776.50				5776.50	5776.50		

SCHEDULE G—Continued

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
Supply, O. E.....		937.70			1.05	938.75	938.75		
Supply, Adv.....		300.00				300.00	159.01	140.99	
Insurance		3883.91				3883.91	3883.91		
Municipal Registers.....		225.00				225.00	215.14	9.86	
Huntington Hall—Con- tingent Fund.....	267.65					267.65			267.65
	617.65	106769.04	1000.00	10018.52	59.85	118465.06	117105.12	974.53	385.41

2—Protection of Life and Property

Police, S. & W.....		150000.00		2203.75	2.75	152206.50	151279.74	926.76	
Police, O. E.....		5295.61			1.50	5297.11	5297.11		
Fire, S. & W.....		146951.25				146951.25	146810.27	140.98	
Fire, O. E.....		29790.61				29790.61	29790.61		
P o l i c e, Underground Wires	4000.00					4000.00	3729.49		270.51
Fire, Underground Wires	3000.00					3000.00	2993.44	6.56	
Rifle Range, W.....		624.00				624.00	624.00		
Rifle Range, O. E.....		300.00	1400.00			1700.00	1568.52		131.48
Building Department, W.		13877.30		505.31	14.13	14396.74	14396.74		
Building Department, O. E.....		8595.50	500.00	572.17	1.00	9668.67	9168.67		500.00
Wire Inspector, S.....		2234.76				2234.76	2234.76		
Wire Inspector, O. E....		300.00				300.00	289.53	10.47	
Sealer, S.....		1980.00				1980.00	1980.00		
Sealer, O. E.....		750.00				750.00	744.71	5.29	

SCHEDULE G—Continued

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
Moth & Beetle Ex.....		8675.12				8675.12	8675.12		
Care of Trees.....		1000.00				1000.00	1000.00		
Fish Warden.....		40.00				40.00	40.00		
Pound Keeper.....		5.00				5.00	5.00		
Building Fund.....	49708.00					49708.00			49708.00
Smoke Inspector.....		100.00				100.00	89.80	10.20	
Chief's Automobile.....		2000.00				2000.00	2000.00		
Rebuilding Race St.									
F. H.			20000.00			20000.00	14166.93		5833.07
Drowning Apparatus....		200.00				200.00	199.97	.03	
Fire House Improve-									
ments			2250.00			2250.00	1641.45		608.55
	56708.00	372719.15	24150.00	3281.23	19.38	456877.76	398725.86	1100.29	57051.61

3—Health and Sanitation

Health Office, S.....	10616.00					10616.00	10616.00		
Health Office, O. E.....	7436.40					7436.40	7436.40		
Health Yard, W.....	40323.24				1.35	40324.59	40324.59		
Health Yard, O. E.....	4559.94		6400.00	754.38		11714.32	11714.32		
Milk Inspection, W.....	2204.00					2204.00	2202.00	2.00	
Milk Inspection, O. E....	375.00					375.00	332.66	42.34	
Inspector of Animals, S.	500.00					500.00	500.00		
Inspector of Animals,									
O. E.....	23.25					23.25	23.25		
Sewer Maintenance, W..	14775.60			443.69		15219.29	15219.29		

SCHEDULE G—Continued

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
Sewer Maintenance, O. E.		3000.00		2209.92	150.00	5449.92	5334.54	115.38	
Sewer Construction.....			70000.00		41.20	70041.20	52100.54		17940.66
School Inspection.....		820.00				820.00	800.00	20.00	
Contagious Hospital.....	1000.00					1000.00	48.93		951.07
	1000.00	84633.43	76400.00	3497.99	192.55	165723.97	146652.52	179.72	18891.73
4—Highways and Bridges									
Streets, S. & W.....		114045.55	22810.00	1947.19	142.51	138945.25	138945.25		
Streets, O. E.....		35000.00		36905.48	105.45	72010.93	68984.59	3026.34	
New Sidewalks.....		5000.00		1931.83		6931.83	6918.25	13.58	
Street Watering, W.....		4630.48		1103.63		5734.11	5734.11		
Street Watering, O. E...		14000.00		1156.19		15156.19	15156.19		
Street Lighting.....		101439.25				101039.25	100334.12	705.13	
State Highway Tax.....		115.00				115.00	115.00		
Congress and Billerica Street Bridge.....	7244.22				1.25	7245.47	5406.70		1838.77
Lawrence Street Bridge, Meadow Brook.....	11903.80				10.00	11913.80	11449.66		464.14
Shaw Street Extension..	989.84					989.84			989.84
Paving portions of Gor- ham, Dutton, Merri- mack, Merrimack Sq., East Merrimack and Middlesex Sts., and regulating the side- walks thereon.....			75000.00		13.50	75013.50	66785.84		8227.66

SCHEDULE G—Continued

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
Paving Aiken Street....			6500.00			6500.00	6452.16	47.84	
Macadamizing Summit St., Knapp Ave., North, Otis, Washington Sts., parts of Stackpole, Mansur, Dalton, West 6th, Riverside, Bourne, Moody & Lilley Ave....			35000.00			35000.00	29408.31		5591.69
Repairing and Painting Bridges—East Merri- mack St., Jefferson St., Aiken St., Market St., and Cambridge St.									
Bridges			17000.00		19.38	17019.38	13146.76		3872.62
Extension Stromquist Ave.			3750.00			3750.00	1100.51		2649.49
Paving East Merrimack St. (Howe to Fayette)			2700.00			2700.00			2700.00
	20137.86	273830.28	162760.00	43044.32	292.09	500064.55	469937.45	3792.89	26334.21

SCHEDULE G—Continued

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
5—Charities									
Charity--Out Door Relief		41260.85		1357.58	34.00	42652.43	42652.43		
Charity—Hospital		54477.58		8404.98	8.00	62890.56	62890.56		
Charity—City Hospital Repairs		2360.00				2360.00	2358.48	1.52	
		98098.43		9762.56	42.00	107902.99	107901.47	1.52	
6—Soldiers' Benefits									
State Aid—Office		2100.00				2100.00	2074.45	25.55	
State Aid		17500.00			27.00	17527.00	16903.00	624.00	
Military Aid		3238.00				3238.00	3238.00		
Soldiers' Relief		18492.90			12.00	18504.90	18504.90		
		41330.90			39.00	41369.90	40720.35	649.55	
7—Education									
Schools		371333.12	30540.00		96.62	401969.74	401969.70		
School Houses, W.		10353.52		2652.24		13005.76	13005.76		
School Houses, O. E.		10471.05	800.00	5574.42		16845.47	16845.27		
Library		15500.00				15500.00	15500.00		
Textile School		8000.00				8000.00	8000.00		
School House Repairs		3582.86	4165.00			7747.86	7747.86		
		419240.55	35505.00	8226.66	96.62	463068.83	463068.83		

SCHEDULE G—Continued

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
8—Recreation									
Parks, W.....		10000.00			15.33	10015.33	10015.33		
Parks, O. E.....		4100.82		299.00		4399.82	4399.82		
Playgrounds		2304.23				2304.23	2304.23		
Lucy Larcom Park.....		1000.00				1000.00	785.89	214.11	
Memorial Day, G. A. R..		1000.20				1000.20	1000.20		
Memorial Day, S. W. V..		350.00				350.00	349.94	.06	
Band Concerts.....		700.00				700.00	677.43	22.57	
July Fourth.....		1602.70				1602.70	1602.70		
Shedd Playground.....	6239.66		10000.00			16239.66	14147.59		2092.07
Repairing School Gr'ds.		500.00				500.00	500.00		
Baltimore March Anni- versary		2500.00				2500.00	2100.17	399.83	
Labor Day.....		1000.00				1000.00	999.00	1.00	
Little Canada Play- ground (Water Piping)		500.00				100.00	99.88	.12	
Columbus Day Observ- ance		500.00				500.00	500.00		
	6239.66	25657.95	10000.00	299.00	15.33	42211.94	39482.18	637.69	2092.07

SCHEDULE G—Continued

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
9—Unclassified									
Carney Medal Fund.....	200.00					200.00			200.00
Claims and Court Exe- cutions		2814.50				2814.50	2814.50		
Portraits—G. W. Fifield and Geo. Runels.....		600.00				600.00	600.00		
	200.00	3414.50				3614.50	3414.50		200.00

10—Public Service Enterprises

Water Works.....	3517.63	1967.69			223703.98	229189.30	229189.30		
Water Works, New Pump			59514.87	265.41		59780.28	59780.28		
City Weigher, S.....		800.00				800.00	800.00		
City Weigher, O. E.....		10.16				10.16	10.16		
New Reservoir, New Wells, New Pumping Station			100000.00			100000.00	23218.99		76781.01
Water Loan Sinking Fund					75000.00	75000.00	75000.00		
	3517.63	2777.85	159514.87	265.41	298703.98	464779.74	387998.73		76781.01

SCHEDULE G—Continued

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
11—Cemeteries									
Edson and Others.....		8094.70	635.00			8729.70	8729.70		
New Gate.....	2500.00	8094.70	635.00			2500.00	2500.00		
	2500.00	8094.70	635.00			11229.70	11229.70		
12—Interest, Municipal Indebtedness, Sinking Funds									
Interest		140000.00				140000.00	136486.67	3513.33	
Temporary Loans.....	700000.00				1200000.00	1900000.00	1200000.00		700000.00
City Debt.....		269164.20		2700.00		271864.20	271864.20		
Sinking Funds.....		30500.00				30500.00	30500.00		
	700000.00	439664.20		2700.00	1200000.00	2342364.20	1638850.87	3513.33	700000.00
13—Agency Trust Investments									
State Tax.....		120725.00				120725.00	120725.00		
Non-Resident Bank Tax.		11456.37				11456.37	11353.67	102.70	
County Tax.....		77079.42				77079.42	77079.42		
Corporation Tax.....		89.14				89.14	89.14		
Liquor Licenses.....		44375.00				44375.00	34940.00	9435.00	
Grade Crossings.....		2564.35				2564.35	2564.35		
		256289.28				256289.28	246751.58	9537.70	

SCHEDULE G—Continued

	Balances from 1910	Appropriated from Revenue	Appropriated from Loans	Department Transfers	Cash Receipts	Total Appropriated	Total Expended	Balances Unexpended	Balances to 1912
14—Refunds									
Abatement of Taxes (after payment).....		128.83				128.83	128.83		
Release of Tax Titles...		1223.36				1223.36	1223.36		
Street Watering Abate- ment		3.91				3.91	3.91		
		1356.10				1356.10	1356.10		

APPROPRIATIONS AND EXPENDITURES FROM THE GENERAL TREASURY FUND BY DEPARTMENTS.

1. DEPARTMENTAL

City Council Fund	Clerk of Committees
Mayor	Elections
Auditor	Registrars
Treasurer	State Supervisors
Assessors	Engineering
City Clerk	Supply
Messenger	Insurance
Law	Municipal Registers
Clerk of Common Council	Huntington Hall—Contingent Fund

CITY COUNCIL FUND

Appropriation	\$ 1,928.43	
		\$ 1,928.43
Expended		
For Stationery, Printing, etc.:		
Courier-Citizen Co.	\$ 56.15	
Dumas & Co.....	248.50	
Lawler Printing Co.....	250.00	
L'Etoile Publishing Co.....	1.35	
Lowell Sun	11.03	
Lowell Telegram	1.33	
G. C. Prince & Son.....	338.40	
Charles S. Proctor.....	17.10	
		\$ 923.86
For Entertainment, etc.:		
Wm. F. Foye & Co.....	\$ 4.00	
D. L. Page Co.....	66.00	
Park Hotel	4.00	
F. E. Putnam.....	6.40	
Waverly Hotel	8.00	
		\$ 88.40
For Transportation, etc.:		
American Express Co.....	\$ 6.99	
J. H. Dunham.....	9.00	
M. S. Feindel.....	13.50	
Lowell Coach Co.....	268.15	
Mercier's Auto Livery.....	34.50	
Edward H. Mercier.....	22.50	
Moody Bridge Garage Co.....	35.00	
J. H. Sparks.....	9.00	
		\$ 398.64

For Sundries:

Joseph Albert	\$ 4.00	
Amadee Archambault	8.00	
John H. Burke.....	24.50	
Collin's	25.00	
F. M. Dowling.....	78.98	
George A. Evans.....	19.25	
J. J. Mahoney.....	124.80	
John L. McDonough.....	8.00	
E. S. Morse.....	100.00	
James Shanley	50.00	
Charles F. Young & Co.....	75.00	
	<hr/>	\$ 517.53
		<hr/>
		\$ 1,928.43
		<hr/>

MAYOR'S DEPARTMENT**Salaries**

Appropriation	\$ 4,200.00	
	<hr/>	\$ 4,200.00
		<hr/>

Expended

John F. Meehan, Mayor.....	\$ 3,000.00	
Warren P. Riordan, Secretary.....	1,200.00	
	<hr/>	\$ 4,200.00
		<hr/>

Other Expenses

Appropriation	\$ 883.55	
	<hr/>	\$ 883.55
		<hr/>

Expended

For Stationery, Printing, etc.:

Annabel Coleman	\$ 8.00	
Courier-Citizen Co.	6.00	
Charles E. Galley.....	3.85	
John Hollowood	30.00	
Agnes C. Kirwin.....	2.00	
Helen Kirwin	18.00	
Lowell Sun	6.00	
G. C. Prince & Son.....	51.88	
Sampson & Murdock Co.....	3.00	
F. A. M. Tobin's Printery.....	59.50	
	<hr/>	\$ 188.23

For Telephone, Transportation, etc.:

Boston & Maine R. R.....	\$ 20.25	
O. P. Davis.....	9.00	
Frank Fay	4.00	
T. J. Husband.....	3.00	
Lowell Coach Co.....	1.50	
J. F. Meehan.....	13.15	
E. K. Mercier.....	53.90	
C. K. Miller.....	81.00	

For Telephone, Transportation, etc.—Continued

New England Tel. & Tel. Co.....	25.92	
J. H. Sparks.....	309.95	
	<hr/>	\$ 521 67

For Sundries:

M. S. Feindel.....	\$ 27.00	
John F. Meehan.....	15.00	
Moody Bridge Automobile Co.....	43.00	
Richardson Hotel	34.30	
Mrs. Nellie Sullivan.....	38.00	
Waverly Hotel	13.85	
A. M. Wood.....	2.50	
	<hr/>	\$ 173.65
		<hr/>
		\$ 883.55
		<hr/>

AUDITOR'S DEPARTMENT

Salaries

Appropriation	\$ 4,084.41	
	<hr/>	\$ 4,084.41
		<hr/>

Expended

Charles D. Paige, Auditor.....	\$ 1,800.00	
James T. Dunfey, Clerk.....	1,246.00	
Clinton P. Tuttle, Clerk.....	767.25	
Eleanor M. Churchill, Clerk.....	271.16	
	<hr/>	\$ 4,084.41
		<hr/>

Other Expenses

Appropriation	\$2,377.93	
	<hr/>	\$ 2,377.93
		<hr/>

Expended

Stationery, Printing, Binding, Office Supplies, etc.:

American City Publishing Co.....	\$ 1.00	
T. J. Bromilow.....	1.50	
Buckland Printing Co. (Reports).....	766.55	
A. Bushnell Co.....	4.75	
Butterfield Printing Co.....	238.25	
O. J. Carney Co.....	48.00	
Carter's Ink Co.....	2.25	
Dumas & Co.....	139.00	
Charles E. Galley.....	7.55	
Osmond Long	130.00	
Lowell Sun	5.75	
T. F. McCarthy.....	2.50	
Patrick Murphy	2.00	
G. C. Prince & Son.....	89.54	
Sampson & Murdock Co.....	3.00	
Union Printing Co.....	33.47	
Union Stamp Works.....	13.50	
	<hr/>	\$ 1,488.61

Repairs, Fixtures, Sundries:

American Express Co.....	.20	
F. E. Andrews.....	2.50	
Cheney & Thomson.....	51.77	
Courier-Citizen Co.	3.00	
O. P. Davis.....	12.00	
Government Accountant, Machine.....	91.50	
Lowell Coach Co.....	7.00	
Lowell Sun	8.20	
Lull & Hartford.....	15.00	
W. K. Miller & Son.....	40.50	
Murthey F. Lyons.....	2.50	
E. S. Morse & Co.....	450.00	
N. E. Tel. & Tel. Co.....	22.44	
N. Y. & Boston Express Co.....	10.35	
H. W. O'Brien.....	7.08	
O. W. Peabody.....	9.00	
C. D. Paige.....	34.00	
Richardson Hotel	9.15	
J. H. Sparks.....	7.00	
J. K. Stewart Co.....	38.95	
J. A. Thomson Co.....	1.68	
G. A. Nelson, Agt.....	65.50	
	<hr/>	\$ 889.32
		<hr/>
		\$ 2,377.93
		<hr/>

ASSESSORS' DEPARTMENT**Salaries**

Appropriation	\$12,776.85	
	<hr/>	\$12,776.85
		<hr/>

Expended

For Principal Assessors:

C. A. Abbott.....	\$ 2,250.00	
A. J. Blazon.....	2,250.00	
S. S. Mayberry.....	1,155.80	
J. J. O'Sullivan.....	1,094.20	
	<hr/>	6,750.00

For Assistant Assessors:

To Sundry Persons.....	\$ 900.00	
	<hr/>	900.00

For Permanent Clerks:

William J. Reardon.....	\$ 1,600.00	
Marietta L. McGrath.....	815.35	
	<hr/>	2,415.35

For Temporary Clerks:

To Sundry Persons.....	\$ 2,711.50	
	<hr/>	2,711.50

\$12,776.85

Other Expenses

Appropriation	\$ 2,567.80	
		<u>\$ 2,567.80</u>
To Stationery, Printing, etc.:		
Auto List Publishing Co.....	\$ 2.00	
Banker & Tradesman.....	5.00	
T. J. Bromilow.....	7.50	
Butterfield Printing Co.....	1,356.00	
Carter's Ink Co.....	1.50	
Courier-Citizen Co.	8.00	
Dumas & Co.....	111.25	
Lawler Printing Co.....	47.80	
P. B. Murphy.....	12.25	
G. C. Prince & Son.....	41.15	
Monarch Typewriter Co.....	45.00	
Sampson & Murdock Co.....	12.00	
		<u>1,649.45</u>
For Tax Books:		
Courier-Citizen Co.	\$ 834.70	
		<u>834.70</u>
For Sundries:		
American Express Co.....	.20	
Arthur Bartlett	11.70	
Allan H. Drury.....	.55	
Joseph Flynn	7.00	
New Eng. Tel. & Tel. Co.....	.20	
Jeremiah J. O'Sullivan.....	11.00	
Wm. J. Reardon.....	1.50	
J. H. Sparks.....	51.50	
		<u>83.65</u>
		<u>\$ 2,567.80</u>

TREASURER'S DEPARTMENT**Salaries**

Appropriation	\$ 9,004.00	
		<u>\$ 9,004.00</u>

Expended

Andrew G. Stiles.....	\$ 2,700.00	
Joseph Farrell	1,500.00	
Charles C. Wilson.....	1,300.00	
J. Hector Lavallee.....	1,000.00	
Minnie Freeman	626.00	
Kittie Miskella	626.00	
Maud Macpherson	626.00	
Jeanie McIntyre	626.00	
		<u>\$ 9,004.00</u>

Other Expenses

Appropriation	\$ 3,719.28	
		<u>\$ 3,719.28</u>

Expended

For Stationery, Printing, etc.:	
A. R. Andrews.....	\$ 6.00
Banker & Tradesman.....	5.00
Boston News Bureau.....	12.00
Buckland Printing Co.....	176.25
Burroughs Adding Machine Co.....	4.00
Butterfield Printing Co.....	320.50
Carter's Ink Co.....	2.25
Dumas & Co.....	166.03
Allan N. Drury.....	1.10
C. E. Galley.....	10.45
H. R. Hale.....	20.00
J. A. Legare.....	106.20
Lowell Post Office.....	212.40
R. C. Paradis.....	73.50
G. C. Prince & Son.....	90.00
Sampson & Murdock Co.....	6.00
A. G. Stiles.....	1.25
A. G. Thompson.....	424.80
Union Printing Co.....	72.50
	<hr/>
	\$ 1710.23
For Sundries:	
American Express Co.....	.40
Courier-Citizen Co.	406.00
Lowell Sun	336.00
Lull & Hartford.....	10.00
Middlesex Registry of Deeds.....	58.75
Middlesex Safe & Deposit Co.....	90.00
New England Tel. & Tel. Co.....	18.40
Norcross & Leighton.....	300.00
F. Ricard	2.00
E. M. Tucke.....	120.00
	<hr/>
	\$ 1,341.55
For Writing and Distributing Tax Bills:	
To Sundry Persons.....	667.50
	<hr/>
	\$ 3,719.28

CITY CLERK'S DEPARTMENT**Salaries**

Appropriation	\$ 5,552.00	
	<hr/>	\$ 5,552.00
For City Clerk:		
Girard P. Dadman.....	\$ 450.00	
Stephen Flynn	1,350.00	
	<hr/>	1,800.00
For Assistant Clerk:		
William P. McCarthy.....	\$ 1,500.00	
	<hr/>	1,500.00

For Clerks:

Belle C. Hill.....	\$ 728.00	
Annie H. Bedlow.....	624.00	
Ethel H. Tilton.....	520.00	
Catherine Farrell	380.00	
	<hr/>	2,252.00
		\$ 5,552.00

Other Expenses

Appropriation	\$ 1,273.25	
	<hr/>	\$ 1,273.25

Expended

For Reporting Births:

To Physicians, Nurses, Enumerators....	\$ 747.45	
	<hr/>	\$ 747.45

For Stationery, Printing, etc.:

A. K. Andrews.....	\$ 8.00	
A. K. Bedlow.....	2.50	
Thomas J. Bromilow.....	4.00	
A. Bushnel Co.....	1.25	
Carter's Ink Co.....	4.00	
Courier-Citizen Co.	9.90	
E. Cryan .....	.85	
G. P. Dadman.....	15.87	
Dumas & Co.....	41.25	
S. Flynn	48.39	
A. F. French & Co.....	1.00	
Charles E. Galley.....	2.50	
H. C. Kittredge.....	.35	
Lawler Printing Co.....	63.00	
Lowell Sun	9.60	
L'Etoile	12.50	
Lowell Telegram	3.50	
T. F. McCarthy.....	47.75	
H. M. Meek.....	18.00	
G. C. Prince & Son.....	32.15	
Riley & Sanborn.....	3.00	
Sampson & Murdock Co.....	6.00	
Smith Premier Typewriter Co.....	8.20	
F. A. M. Tobin's Printery.....	32.00	
Union Printing Co.....	104.76	
	<hr/>	480.32

For Sundries:

American Express Co.....	\$ 4.05	
Boston & Lowell Express Co.....	.25	
F. N. Burnham.....	10.00	
Lowell Coach Co.....	4.00	
New England Tel. & Tel. Co.....	7.09	
	<hr/>	\$ 25.39

Returned to General Treasury Fund.....

20.09

\$ 1,273.25

MESSENGER'S DEPARTMENT**Salaries**

Appropriation	\$10,682.94	
	<hr/>	\$10,682.94

Expended

For Messenger:

C. F. Cronin.....	\$ 235.42	
Joseph E. Pattee.....	922.54	
E. F. Queenan.....	28.98	
Sundry Persons for Labor.....	94.96	
	<hr/>	\$10,682.94

Other Expenses

Appropriation	\$ 8,000.55	
	<hr/>	\$ 8,000.55

Expended

For Hardware, etc.:

I. O. Adams.....	\$ 2.00	
F. G. Baldwin.....	3.00	
C. B. Coburn Co.....	21.23	
H. C. Girard Co.....	45.28	
J. M. Jones.....	1.68	
John A. Thomson & Co.....	49.50	
Thompson Hardware Co.....	1.50	
Wear Proof Mat Co.....	64.60	
	<hr/>	188.79

For Express, Transportation, etc.:

Adams Express Co.....	\$.70	
American Express Co.....	1.55	
Boston & Maine R. R.....	.82	
F. N. Burnham	14.00	
Conway Transfer Co.....	1.07	
Lowell Coach Co.....	21.50	
Manchester & Concord Express Co.....	1.60	
C. K. Miller.....	20.25	
J. H. Sparks.....	23.00	
	<hr/>	84.49

For Entertainments and Decorations:

Charles F. Young.....	\$ 75.00	
	<hr/>	75.00

For Stationery, Printing, etc.:

E. Cryan	\$ 5.10	
Courier-Citizen Co.	3.00	
Dumas & Co.....	.50	
T. F. McCarthy.....	12.25	
H. M. Meek Publishing Co.....	3.00	
G. C. Prince & Son.....	127.48	
Sampson & Murdock Co.....	6.00	
F. A. M. Tobin's Printery.....	5.25	
Union Printing Co.....	25.55	
	<hr/>	188.13

For Lighting City Hall:

Lowell Gas Light Co.....	\$ 288.28	
Lowell Electric Light Corp.....	1,234.86	
	<hr/>	\$ 1,523.14

For Lighting Memorial Hall:

Lowell Gas Light Co.....	\$ 34.30	
Lowell Electric Light Corp.....	104.59	
	<hr/>	138.89

For Fuel:

Edward Cawley	\$ 898.02	
Horne Coal Co.....	\$ 2,454.83	
	<hr/>	\$ 3,352.85

For Furniture, Fixtures, Repairs, etc.:

Adams & Co.....	\$ 34.50	
H. R. Barker Mfg. Co.....	.90	
Bon Marche	2.40	
L. A. Derby.....	22.77	
Farrell & Conaton.....	5.60	
H. F. Harding.....	35.22	
Lowell Gas Light Co.....	.80	
New Eng. Electric & Supply Corp.....	2.32	
Robertson Co.	39.75	
J. Steinmetz	3.36	
Welch Bros.	21.15	
	<hr/>	168.77

For Sundries:

App. Police Wages.....	\$ 1,003.75	
App. Water Works.....	202.71	
Adams & Co.....	12.35	
H. R. Barker Mfg. Co.....	4.00	
Edward J. Barrett.....	4.00	
Edward Bushnell	25.00	
J. B. Boudreau.....	8.00	
Cancos Mfg. Co.....	31.47	
C. B. Coburn Co.....	71.43	
J. B. V. Coburn.....	54.70	
Collins	6.00	
Crandall Packing Co.....	5.74	
L. A. Derby & Co.....	11.90	
Donovan Harness Co.....	25.50	
Frye & Crawford Drug Co.....	1.90	
Gilbride Co.	3.23	
Daniel Gage	83.63	
Harry F. Harding.....	7.91	
C. M. Holmes.....	2.00	
Abbott Lawrence	50.00	
Lowell Coach Co.....	2.00	
J. J. McManmon.....	4.00	
Merrimack Steam Laundry.....	2.39	
Willard W. Morrison.....	6.00	
New Eng. Electric & Supply Corp.....	57.78	
New Eng. Tel. & Tel. Co.....	32.75	
No Dust Mfg. Co.....	12.50	

For Sundries:—Continued

D. J. O'Brien.....	3.00	
O'Donnell Dry Goods Co.....	275.91	
D. Perreault	8.50	
A. G. Pollard Co.....	14.70	
Regan & Kirwin.....	18.35	
Talbot Dyewood & Chemical Co.....	36.29	
Charles E. Walsh.....	26.20	
Fred F. Welch.....	1.25	
Welch Bros.	24.22	
Wm. E. Westall.....	17.25	
C. F. Young.....	5.00	
	<hr/>	2,165.31
Returned to General Treasury Fund.....		115.18
		<hr/>
		\$ 8,000.55

LAW DEPARTMENT**Salaries**

Appropriation	\$ 4,826.00	
	<hr/>	\$ 4,826.00

Expended

William W. Duncan, City Solicitor.....	\$ 3,000.00	
M. E. McDonald, Claim Agent.....	1,200.00	
Frances E. Andrews.....	626.00	
	<hr/>	\$ 4,826.00

Other Expenses

Appropriation	\$ 1,850.00	
	<hr/>	\$ 1,850.00

Expended

For Stationery, Printing, etc.:

Baker, Voorhis & Co.....	\$ 20.00	
Banker & Tradesman.....	5.00	
Butterfield Printing Co.....	28.00	
E. Cryan .....	.75	
Hobbs & Warren Co.....	2.00	
Keefe, Davidson Co.....	18.00	
Lawler Printing Co.....	31.36	
Lawyers' Co-op. Publishing Co.....	29.00	
Little, Brown & Co.....	15.70	
Matthew, Bender & Co.....	26.50	
G. C. Prince & Son.....	23.15	
Riley & Sanborn.....	3.00	
Sampson & Murdock Co.....	3.00	
Frank Sheppard Co.....	4.00	
Smith Premier Typewriter Co.....	.80	
West Publishing Co.....	40.00	
	<hr/>	250.26

For Sundries:

J. H. Coram.....	\$ 5.00	
Charles K. Darling.....	3.90	
Wm. W. Duncan.....	91.95	
George H. Field.....	5.69	
Frank J. Ladd.....	100.00	
Manchester & Concord Express Co.....	.30	
Middlesex County	72.85	
James Stuart Murphy.....	2.00	
New Eng. Tel. & Tel. Co.....	10.39	
Gardner W. Pearson.....	650.00	
Eleanor Rivet	3.00	
A. F. Salmon.....	10.00	
T. B. Smith.....	33.00	
G. F. Stiles.....	41.90	
	<hr/>	\$ 1,029.98

For Grade Crossings:

Wm. C. Doherty.....	\$ 160.00	
Wm. W. Duncan.....	32.00	
C. H. Nelson.....	150.00	
Charles M. Potter.....	100.00	
Names Whittet	10.00	
	<hr/>	452.00
		\$ 1,732.24
Balance to 1912.....		117.76

\$ 1,850.00
CLERK OF COUNCIL

Appropriation	\$ 300.00	
	<hr/>	\$ 300.00

Expended

To Frank M. Dowling.....	\$ 300.00	
	<hr/>	\$ 300.00

CLERK OF COMMITTEES**Salary**

Appropriation	\$ 1,400.00	
	<hr/>	\$ 1,400.00

Expended

To Frank M. Dowling.....	\$ 1,400.00	
	<hr/>	\$ 1,400.00

Other Expenses

Appropriation	\$ 200.00	
	<hr/>	\$ 200.00

Expended

For Stationery, Printing, etc.:

Dumas & Co.....	\$ 11.00
C. E. Galley.....	5.00
G. C. Prince & Son.....	11.75
Union Printing Co.....	46.50

74.25

For Sundries:

Lowell Coach Co.....	10.75
H. L. P. Turcotte.....	30.00
A. M. Wood.....	71.40

112.15

186.40

Returned to General Treasury Fund.....

13.60

\$ 200.00

ELECTIONS

Appropriations \$10,130.00

\$10,130.00

For Election Officers:

To Sundry Persons..... \$ 5,400.00

For Clerks:

To Sundry Persons..... 621.38

For Wages:

To Sundry Persons..... 1,240.73

7,262.11

For Stationery, Printing, etc.:

Buckland Printing Co.....	\$ 66.25
Butterfield Printing Co.....	63.00
Courier-Citizen Co.	620.20
G. P. Dadman.....	2.50
Stephen Flynn	10.00
A. F. French Co.....	37.30
Harry C. Kittredge.....	1.00
L'Etoile	23.25
Lawler Printing Co.....	124.00
Osmond Long	12.20
Lowell Telegram	3.60
T. F. McCarthy.....	7.25
G. C. Prince & Son.....	85.35
Charles S. Proctor.....	156.83
F. A. M. Tobin's Printery.....	109.75
Union Printing Co.....	24.50
M. G. Wight & Co.....	5.50

1,352.48

For Teaming:

L. T. Beehard.....	\$ 32.00	
Thomas Casey	9.00	
Conway Transfer Co.....	50.75	
City Transfer Co.....	9.00	
C. H. Hanson & Co.....	67.00	
Napoleon Lavoie.....	3.00	
Thomas G. Little.....	23.00	
J. H. McDonald.....	16.00	
Hugh McGrogan	5.00	
Joseph Murphy	20.00	
S. W. Parker.....	16.00	
Owen Queenan	15.00	
Michael Reynolds	20.00	
Stanley Transportation Co.....	100.00	
		<hr/>
		385.75

For Sundries:

Bulletin Pariossial Franco-American....	11.10	
W. H. Bamford.....	10.00	
Thomas Casey	3.00	
Mrs. H. Chaput.....	10.00	
C. B. Coburn Co.....	55.67	
Courier-Citizen Co.	18.15	
E. Cryan	6.21	
A. F. French & Co.....	25.30	
H. C. Girard Co.....	3.50	
W. T. Griffin.....	28.00	
E. F. Hathaway.....	1.00	
L'Etoile Publishing Co.....	25.80	
Lowell Telegram	11.70	
Ernest Lundgren	30.00	
Dr. E. F. Lungren.....	4.00	
Lowell Sun	54.90	
A. Mackenzie	4.00	
John McManmus	7.25	
Merrimack Valley Labor Journal.....	16.00	
E. E. Smith Co.....	10.00	
J. R. Smith & Sons.....	20.00	
J. H. Sparks.....	11.00	
Richard Taft	6.00	
Frank L. Weaver & Son.....	71.40	
Public Buildings, O. E.....	21.39	
		<hr/>
		465.37

Balance to General Treasury Fund.....

9,465.71

664.29

\$10,130.00

REGISTRARS

Appropriation	\$ 5,172.74	
	<hr/>	\$ 5,172.74

Expended

Board of Registrars:

J. O. Allard.....	\$ 777.12	
Girard P. Dadman.....	187.50	
George C. Evans.....	410.36	
John P. Farley.....	245.97	
Stephen Flynn	562.50	
H. C. McOsker.....	750.00	
	<hr/>	\$ 2,933.45

For Clerks:

To Sundry Persons.....	\$ 960.50	
	<hr/>	960.50

For Stationery, Printing, etc.:

Courier-Citizen Co.	\$ 850.00	
Lambert Printing Co.....	9.25	
Lawler Printing Co.....	67.00	
Osmond Long	7.70	
G. C. Prince & Son.....	6.20	
Charles S. Proctor.....	.95	
Sampson & Murdock Co.....	6.00	
E. L. Turcotte.....	1.30	
Union Printing Co.....	6.50	
	<hr/>	954.90

For Sundries:

F. N. Burnham.....	\$ 23.00	
Courier-Citizen Co.	14.40	
Victor E. Dozois.....	35.00	
Dwyer & Co.....	39.08	
H. C. Girard.....	1.15	
L'Hetoile Publishing Co.....	5.40	
Lowell Sun	10.65	
Lowell Telegram	2.50	
Lowell Wall Paper Co.....	7.10	
Moody Bridge Auto Co.....	6.00	
D. L. Page Co.....	79.46	
Page's Spa	2.75	
Page Catering Co.....	97.40	
	<hr/>	323.89

\$ 5,172.74

STATE SUPERVISORS

Appropriation	\$ 125.00	
	<hr/>	\$ 125.00

Expended

To Sundry Persons.....	\$ 125.00	
	<hr/>	\$ 125.00

ENGINEERING

Appropriation	\$16,018.52	
	<hr/>	\$16,018.52
Expended		
For City Engineer:		
To George Bowers.....	\$ 675.00	
To Stephen Kearney.....	2,025.00	
	<hr/>	2,700.00
For Wages:		
To Sundry Persons.....	\$12,852.18	
	<hr/>	12,852.18
For Stationery, Printing, etc.:		
Geo. F. Allen.....	\$ 6.25	
C. L. Berger & Sons.....	16.36	
Engineering Record	3.00	
Thomas Groom & Co.....	6.25	
Hooper, Lewis & Co.....	10.00	
J. S. Huddleston.....	2.50	
H. C. Kittredge.....	4.50	
B. L. Makepeace.....	60.94	
T. F. McCarthy.....	15.00	
Municipal Engineering Co.....	2.00	
Municipal Journal & Engineer.....	3.00	
G. C. Prince & Son.....	37.78	
Sampson & Murdock Co.....	16.25	
Smith Premier Typewriter Co.....	14.70	
F. A. M. Tobin's Printery.....	15.25	
	<hr/>	213.78
For Express, Transportation, Telephone, etc.:		
Adams Express Co.....	\$ 1.18	
American Express Co.....	2.95	
George Bowers	3.00	
Arthur Bartlett	36.20	
Guy B. Gray.....	.80	
Alden B. Ilsley.....	4.55	
Stephen Kearney	6.35	
Manchester & Concord Express Co.....	.15	
C. K. Miller.....	20.25	
George A. Nelson.....	7.75	
New Eng. Tel. & Tel. Co.....	18.12	
J. H. Sparks.....	13.00	
	<hr/>	114.30
For Sundries:		
Geo. F. Allen.....	\$ 6.25	
G. L. Cady & Sons.....	2.15	
Donovan Harness Co.....	2.00	
H. C. Girard Co.....	1.33	
G. B. Gray.....	2.95	
Stephen Kearney	2.00	
R. J. Lang & Co.....	.15	
Lowell Electric Light Corp.....	24.00	

For Sundries:—Continued

Lull & Hartford.....	6.55	
John A. McEvoy.....	1.00	
Middlesex Registry of Deeds.....	16.75	
Sawyer Carriage Co.....	7.65	
E. R. Springee.....	12.00	
John A. Stevens.....	1.16	
Talbot Dye & Chem. Co.....	2.10	
Thompson Hardware Co.....	39.70	
	<hr/>	127.74
Returned to General Treasury Fund.....		10.52
		<hr/>
		\$16,018.52

SUPPLY DEPARTMENT**Salaries**

Appropriation	\$ 5,776.50	
	<hr/>	\$ 5,776.50
For Purchasing Agent:		
Edward H. Foye.....	\$ 2,393.42	
Peter A. Mackenzie.....	6.58	
	<hr/>	2,400.00
For Clerks:		
Thomas J. Murphy.....	\$ 936.00	
Walter C. Bruce.....	801.00	
Abram Fenton	780.00	
Mary H. Downey.....	232.50	
Eleanor M. Churchill.....	627.00	
	<hr/>	3,376.50
		\$ 5,776.50

Other Expenses

Appropriation	\$ 938.75	
	<hr/>	\$ 938.75

Expended

For Stationery, Printing, etc.:		
Baker Printing Co.....	\$ 5.50	
Buckland Printing Co.....	65.00	
Carter's Ink Co.....	.75	
Courier-Citizen Co.	5.50	
H. C. Kittredge.....	2.15	
Lawler Printing Co.....	38.50	
Osmond Long	14.75	
T. F. McCarthy.....	26.50	
Robert Paradis	2.40	
G. C. Prince & Son.....	75.85	
Sampson & Murdock Co.....	3.00	
F. A. M. Tobin's Printery.....	12.50	
Union Printing Co.....	2.75	
	<hr/>	255.15

For Telephone, Transportation, etc.:

American Express Co.....	\$	.20	
Boston & Maine R. R.....		20.25	
C. K. Miller.....		131.25	
New Eng. Tel. & Tel. Co.....		17.66	
		<hr/>	169.36

For Carriages, Harnesses and Repairs:

A. H. Cluer.....	\$	4.50	
Donovan Harness Co.....		18.55	
C. H. Hanson & Co.....		129.80	
Lowell Coach Co.....		14.10	
Parker Harness Co.....		.75	
		<hr/>	167.70

For Shoeing and Board of Horse:

C. Desmond	\$	46.75	
Lowell Coach Co.....		287.15	
G. H. Taylor.....		2.14	
		<hr/>	336.04

For Sundries:

Courier-Citizen Co.	\$	3.00	
R. E. Judd.....		7.50	
		<hr/>	10.50
			<hr/>
	\$		938.75

ADVERTISING

Appropriation	\$	300.00	
		<hr/>	\$ 300.00

Expended

Bulletin Paroissial Franco-American....	\$	1.20	
Courier-Citizen Co.		38.64	
L'Etoile Publishing Co.....		40.95	
Lowell Sun		49.70	
Lowell Telegram		28.52	
		<hr/>	159.01
Returned to General Treasury Fund.....			140.99
			<hr/>
	\$		300.00

INSURANCE

Appropriation	\$	3,883.91	
		<hr/>	\$ 3,883.91

Expended

F. M. Brogan.....	\$	214.00	
W. D. Brown		147.56	
F. C. Church.....		172.56	
Collins & Hogan.....		218.25	
G. B. Coburn.....		113.78	
W. E. Dodge.....		68.80	

Expended:—Continued

Jos. Donohue	531.56	
T. Dickey	179.98	
A. L. Gray.....	405.00	
G. D. Kimball.....	295.84	
T. C. Lee & Co.....	652.84	
E. Mansur	73.78	
F. B. Murphy.....	207.56	
Miller & Son.....	147.56	
Norcross & Leighton.....	113.78	
J. Peabody	155.28	
M. Sharkey	36.00	
G. R. Whidden.....	113.78	
H. A. Wright.....	36.00	
	<hr/>	\$ 3,883.91

MUNICIPAL REGISTERS

Appropriation	\$ 225.00	
	<hr/>	\$ 225.00

Expended

Union Printing Co.....	\$ 215.14	
	<hr/>	215.14
Returned to General Treasury Fund.....		9.86
		<hr/>
		\$ 225.00
		<hr/>

HUNTINGTON HALL CONTINGENT FUND

Balance Jan. 1, 1911.....	\$ 267.65	
	<hr/>	\$ 267.65
Balance to 1912.....	\$ 267.65	
	<hr/>	\$ 267.65
		<hr/>

2. PROTECTION OF LIFE AND PROPERTY

Police	Care of Trees
Fire	Fish Warden
Police—Underground Wires	Building Fund
Fire—Underground Wires	Smoke Inspector
Rifle Range	Chief's Automobile
Building Department	Pound Keeper
Wire Inspector	Rebuilding Race Street Fire House
Sealer	Drowning Apparatus
Moth & Beetle Ex.	Fire House Improvements

POLICE DEPARTMENT

Police Board and Commissioned Officers

Salaries

Appropriation	\$152,206.50	
		\$152,206.50
Board of Police:		
Thomas P. Boulger.....	\$ 1,000.00	
Charles H. Hanson.....	1,000.00	
John J. Mullaney.....	1,200.00	
		3,200.00
Secretary:		
John J. Flaherty, Jr.....	\$ 1,500.00	
		1,500.00
Commissioned Officers:		
Redmond Welch, Supt.....	\$ 2,000.00	
Hugh Downey, Deputy Supt.....	1,500.00	
		3,500.00
To Sundry Persons.....		143,079.74
		151,279.74
Returned to General Treasury Fund.....		926.76
		\$152,206.50

Other Expenses

Appropriation	\$ 5,297.11	
		\$. 5,297.11

Expended

For Stationery, Printing, etc.:

Auto List Publishing Co.....	\$ 20.00
Baker Printing Co.....	31.20
Butterfield Printing Co.....	14.50
Carter's Ink Co.....	4.40

Expended:—Continued

Courier-Citizen Co.....	74.40	
Dumas & Co.....	26.75	
H. C. Kittredge.....	1.80	
Lawler Printing Co.....	173.65	
L'Etoile Publishing Co.....	8.10	
Library Bureau .....	.60	
Osmond Long	2.50	
Lowell Sun	16.50	
G. C. Prince & Son.....	331.06	
Charles S. Proctor.....	1.13	
Sampson & Murdock Co.....	12.00	
Smith Typewriter Inspection Co.....	1.45	
Union Printing Co.....	25.00	
M. G. Wight & Co.....	6.00	
		<hr/>
		751.04

For Hardware, etc.:

H. R. Barker Mfg. Co.....	\$	.45	
Bartlett & Dow.....		44.50	
Boutwell Bros.		1.59	
Carroll Bros. ....		.75	
C. B. Coburn Co.....		30.27	
L. A. Derby & Co.....		7.95	
Gamewell Fire Alarm Tel. Co.....		164.32	
C. F. Hoisington & Son.....		5.40	
Lull & Hartford.....		8.50	
W. A. Mack Co.....		11.92	
Middlesex Machine Co.....		.60	
Sampson Lock Co.....		3.16	
Stromberg Carlson Co.....		1.42	
Thompson Hardware Co.....		.47	
Welch Bros.		8.52	
			<hr/>
			289.82

For Shoeing Horses:

M. J. Cahill.....	\$	47.50	
J. J. Donnelly.....		27.05	
			<hr/>
			74.55

For Cloth, Insignia, etc.:

D. A. Cogger.....	\$	6.00	
Gilbride Co.		14.90	
R. Masstranzialo		17.40	
Merrimaek Clothing Co.....		2.00	
A. G. Pollard Co.....		.95	
			<hr/>
			41.25

For Carriages, Harnesses and Repairs:

Donovan Harness Co.....	\$	59.35	
C. H. Hanson & Co., Inc.....		62.60	
Salois & Leith.....		9.25	
Sawyer Carriage Co.....		63.60	
			<hr/>
			194.80

For Transportation, Carriage Hire, etc.:

Adams Express Co.....	\$	.90	
American Express Co.....		6.92	
Boston & Maine R. R.....		2.38	
J. H. Clark.....		15.00	
Lowell Coach Co.....		33.00	
Manchester & Concord Express Co.....		1.00	
Thomas McCloughrey		2.00	
Mercier Auto Livery.....		3.00	
C. K. Miller.....		20.25	
Moody Bridge Auto Co.....		3.00	
Redmond Welch		2.25	
			<hr/>
			89.70

For Automobile Repairs:

Carroll Bros.	\$	1.25	
Church Street Auto Co.....		76.85	
Lowell Auto Co.....		27.00	
Mercier Auto Livery.....		18.00	
Moody Bridge Auto Co.....		3.50	
Pitts Auto Supplies.....		26.58	
E. R. Thomas Motor B. Co.....		195.11	
Wm. Wrigley & Co.....		2.25	
			<hr/>
			350.54

For Hay, Grain, etc.:

James Calnin	\$	78.24	
J. B. Cover & Co.....		46.19	
Fred A. Fox Estate.....		73.69	
E. E. McCausland.....		58.27	
D. Murphy		67.73	
Paul Vigeant & Co.....		12.00	
Wilder & Wotton.....		62.25	
			<hr/>
			398.37

For Water, Lighting and Telephone:

App. Water Works.....	\$	71.13	
Lowell Electric Light Corp.....		326.60	
Lowell Gas Light Co.....		197.80	
New Eng. Tel. & Tel. Co.....		100.75	
			<hr/>
			696.28

For Fuel:

Edward Cawley	\$	430.15	
Horne Coal Co.....		350.75	
			<hr/>
			780.90

For Sundries:

F. & E. Bailey & Co.....	\$	5.53	
Andrea Barbera		7.00	
Edward J. Barrett.....		5.30	
George H. Batchelder.....		7.75	
G. J. & D. Bradt.....		20.80	
W. P. Brazer & Co.....		78.50	
Cancós Mfg. Co.....		11.10	
C. B. Coburn Co.....		221.23	
Colwell Lead Co.....		1.45	
John P. Curley.....		.35	

For Sundries:—Continued

L. A. Derby & Co.....	11.36	
Edes Mfg. Co.....	160.00	
F. M. Ferrin.....	62.05	
Fisk Rubber Co.....	83.95	
Frye & Crawford Drug Co.....	3.50	
Daniel Gage	54.75	
C. O. A. Grover.....	1.00	
Wm. Hamel	36.00	
W. H. Hawes.....	1.50	
Haven G. Hill.....	5.00	
Thomas F. Hoban.....	2.00	
G. E. Hutchins.....	26.98	
Sarah Ingham	23.02	
John St. Public Market.....	.73	
Liberty Square Market.....	33.00	
Lowell Laundry	65.20	
Lull & Hartford.....	1.00	
J. Edwin Lyle.....	5.00	
Marion Studio	1.00	
Joe V. Meigs.....	4.00	
T. J. McDonald.....	1.50	
Geo. A. McIntosh.....	1.25	
Merrimack Engraving Co.....	2.00	
Middlesex Leather Co.....	1.00	
National Dye House.....	2.00	
New Eng. Electrical & Supply Corp.....	39.98	
O'Donnell Dry Goods Co.....	.30	
O. E. O'Heir & Co.....	145.83	
A. Pratt Co.....	22.54	
Fred M. Prescott.....	6.00	
F. H. Randall.....	10.00	
John Regis	24.75	
Rice & Co.....	1.50	
M. Senecal	12.00	
Somerville Brush Co.....	10.55	
J. H. Sparks.....	1.50	
J. W. Stewart.....	3.50	
Stromberg, Carlson Tel. Mfg. Co.....	7.01	
Talbot Dye & Chem. Co.....	123.15	
John A. Thomson & Co.....	205.75	
Charles E. Walsh.....	1.10	
Waterbury Button Co.....	56.25	
Redmond Welch	5.15	
W. E. Westall.....	1.50	
G. H. Wood.....	.75	
Wm. Zimmer	2.95	
		<hr/>
		1,629.86
		<hr/>
		\$ 5,297.11
		<hr/>

FIRE DEPARTMENT**Salaries and Wages**

Appropriation	\$146,951.25	
	<u> </u>	<u>\$146,951.25</u>

Expended

For Chief Engineer:		
Edward S. Hosmer.....	\$ 2,200.00	
	<u> </u>	2,200.00
For Assistant Chief Engineer:		
James F. Norton.....	1,500.00	
	<u> </u>	1,500.00
To Sundry Persons.....	\$143,110.27	
	<u> </u>	143,110.27
		146,810.27
Returned to General Treasury Fund.....		140.98
		<u> </u>
		<u>\$146,951.25</u>

Other Expenses

Appropriation	\$ 29,790.61	
	<u> </u>	\$ 29,790.61

Expended

For Water, Lighting and Telephone:		
App. Water Works.....	\$ 539.32	
Lowell Electric Light Corp.....	432.22	
Lowell Gas Light Co.....	2,472.43	
New Eng. Tel. & Tel. Co.....	266.19	
	<u> </u>	3,710.16
For Veterinary Services:		
Chas. E. Munn.....	\$ 28.00	
W. A. Sherman.....	3.00	
J. H. Sparks.....	100.00	
Jesse A. Viles.....	6.00	
	<u> </u>	137.00
For Horses and Use of Horses:		
C. H. Hanson & Co.....	2,206.60	
	<u> </u>	2,206.60
For Furniture, Bedding, etc.:		
Elie Delisle	\$ 30.00	
John J. Doherty & Co.....	26.60	
Gilbride Co.	291.89	
M. F. Gookin Co.....	5.00	
L. W. Hawks & Co.....	60.75	
A. G. Pollard Co.....	13.50	
Robertson Co.	76.25	
Workshop for the Blind.....	25.70	
	<u> </u>	529.69

For Stable Supplies:

E. J. Barrett.....	\$ 2.75
F. M. Bill & Co.....	122.69
Canco's Mfg. Co.....	62.50
A. H. Cluer.....	10.00
C. B. Coburn Co.....	129.77
Donovan Harness Co.....	24.95
Dustbane Mfg. Co.....	5.00
Gilbride Co.	212.00
C. I. Hood Co.....	14.00
India Alkali Works.....	8.00
Dr. F. G. Lesure.....	38.50
Fred O. Lewis.....	5.05
Lowell Rendering Co.....	57.00
T. J. McDonald.....	28.80
Fred M. Prescott.....	12.00
Talbot Dye & Chem. Co.....	29.84
Charles E. Walsh.....	42.23
Whitman & Pratt Rendering Co.....	21.00

 826.08

For Stationery, Printing, etc.:

Baker Printing Co.....	\$ 23.75
Butterfield Printing Co.....	87.50
Courier-Citizen Co.	170.00
Charles E. Galley.....	9.85
R. E. Judd.....	3.75
Harry C. Kittredge.....	4.50
Lawler Printing Co.....	10.50
R. C. Paradis.....	103.50
G. C. Prince & Son.....	14.55
Union Printing Co.....	15.00
M. G. Wight & Co.....	8.00

 450.90

For Shoeing Horses:

R. R. Armistead.....	\$ 88.72
M. J. Cahill.....	331.52
Jos. Denes.....	75.55
C. Desmond	276.75
J. J. Donnelly.....	191.25
Gauthier & Lemire.....	131.55
M. J. Haggerty.....	47.65
A. D. Mitten.....	138.40
Provencher & Lovering.....	135.00
Henry Reynolds	101.50
S. A. Shattuck.....	62.05
C. C. Thompson.....	90.60
H. Twomey	193.50
Willett Bros.	110.52
J. T. Williamson.....	195.10

 2,169.66

For Hay, Grain, etc.:

J. A. Boucher.....	\$ 146.95
A. W. Clark.....	331.66
Coffey Bros.	291.20

For Hay, Grain, etc.:—Continued

J. B. Cover & Co.....	966.46	
Farmers' Exchange	23.53	
C. H. Hanson & Co.....	2.52	
E. E. McCauslin.....	693.04	
T. J. McDonald.....	992.64	
Jos. Mullin	2,416.03	
Paul Vigeant & Co.....	1,781.77	
Wilder & Wotton.....	1,502.67	
	<hr/>	9,148.47

For Fuel:

John Brady	\$ 19.50	
Edward Cawley	395.82	
Horne Coal Co.....	2,729.58	
George Lynch	9.00	
S. W. Wiggin.....	16.00	
	<hr/>	3,169.90

For Express, Transportation, etc.:

Adams Express Co.....	\$ 7.39	
American Express Co.....	11.75	
Boston & Lowell Express Co.....	1.60	
Boston & Maine R. R.....	1.77	
E. S. Hosmer.....	86.90	
Lowell Coach Co.....	10.00	
Manchester & Concord Express Co.....	3.40	
New York, New Haven & Hartford R. R.	1.65	
J. H. Sparks.....	5.50	
	<hr/>	129.96

For Hardware, Fittings, Hose and Repairs:

American La France Fire Engine Co....	\$ 1.35	
F. G. Baldwin.....	5.91	
H. R. Barker Mfg. Co.....	21.88	
Bartlett & Dow.....	24.05	
W. T. S. Bartlett.....	2.60	
J. C. Bennett.....	26.55	
Boston Engineers Supply Co.....	10.50	
Boutwell Bros.	31.49	
Owen E. Brennan.....	13.50	
C. C. C. Fire Hose & Rubber Co.....	1,601.44	
C. Callahan Co.....	50.76	
Farrell & Conaton.....	7.20	
Gamewell Fire Alarm Tel. Co.....	128.60	
H. C. Girard Co.....	4.96	
C. F. Hoisington & Son.....	6.34	
George E. Hutchins.....	1.00	
O. F. Kress & Son.....	8.00	
Lamson Con. Store Service Co.....	8.00	
Lamson Pat. Specialties Co.....	66.50	
Lamson Plumbing Specialties Co.....	16.00	
Abbott Lawrence	1.00	
D. Lovejoy & Son.....	12.40	
W. A. Mack Co.....	95.23	
D. W. Mullin & Co.....	5.45	

For Hardware, Fittings, Hose and Repairs:—Continued

Nichols Foundry Co.....	.40	
C. N. Perkins Co.....	81.50	
Regan & Kirwin.....	3.50	
A. Roy		
Sawyer Carriage Co.....	8.20	
E. E. Smith Co.....	7.49	
Thompson Hardware Co.....	14.51	
John A. Thomson & Co.....	84.00	
Union Brass Foundry Co.....	19.95	
Welch Bros.	7.20	
		<hr/>
		2,377.46

For Carriages, Harness and Repairs:

Robert Barris	\$ 81.80	
E. P. Bryant.....	39.35	
Charles E. Berry.....	49.10	
Cross Awning & Sign Co.....	5.50	
A. H. Cluer.....	19.40	
O. P. Davis.....	.30	
Donovan Harness Co.....	331.90	
Gauthier & Lemire.....	4.00	
C. H. Hanson & Co., Inc.....	17.00	
J. Hebert	30.05	
G. K. Hamomnd.....	8.55	
F. B. Hill Co.....	415.40	
O. F. Kress & Son.....	106.85	
Parker Harness Co.....	3.00	
D. W. Parker.....	49.50	
C. N. Perkins & Co.....	15.00	
A. Roy	27.15	
Sawyer Carriage Co.....	598.74	
J. H. Swett.....	17.63	
William Wrigley & Co.....	1.10	
J. T. Williamson.....	8.75	
		<hr/>
		1,830.07

For Electrical and Automobile Supplies:

Auto Safety Crank Co.....	\$ 25.00	
Arthur G. Beharrell.....	4.25	
Church St. Auto Corp.....	68.43	
City Hall Garage.....	196.14	
C. B. Coburn Co.....	8.65	
Cross Awning & Sign Co.....	8.50	
L. A. Derby & Co.....	66.38	
Electric Goods Mfg. Co.....	14.40	
Gamewell Fire Alarm Tel. Co.....	6.38	
W. H. Halstead.....	.50	
Kilgore Mfg. Co.....	2.50	
Nox Automobile Co.....	102.44	
Moody Bridge Auto Co.....	391.75	
Pettingell-Andrews Co.	18.50	
Pitts Auto Supplies.....	8.47	
Sawyer Carriage Co.....	131.80	
Stanley Garage	3.00	
Swinehart Tire & Rubber Co.....	229.44	

For Electrical and Automobile Supplies:—Continued

Tucke & Parker Co.....	25.21	
Western Electric Co.....	4.16	
D. H. Wilson & Co.....	2.90	
		<hr/>
		1,318.80

For Sundries:

Adams Hardware & Paint Co.....	\$ 5.88
Lawrence Abbott	25.00
Boston Engineers Supply Co.....	50.00
G. C. Braxmar Co.....	4.75
Canco's Mfg. Co.....	31.25
Carroll Bros.	1.25
C. B. Coburn Co.....	195.58
Emery Cognac	14.00
Cross Awning & Sign Co.....	12.00
P. Dempsey & Co.....	2.80
James E. Freeman.....	3.00
Gilbride Co.	414.50
Newel D. Goff.....	10.00
H. L. Gonzales.....	1.50
Gulf Refining Co.....	11.00
A. H. Halstead.....	2.45
C. H. Hanson & Co.....	13.50
L. W. Hawks & Co.....	3.50
Horne Coal Co.....	23.63
Geo. E. Hutchins.....	11.50
India Alkali Works.....	14.55
Fred W. Jenness.....	96.00
Franklin E. Johnson.....	50.00
Frank A. Kappler.....	5.00
O. F. Kress & Son.....	19.09
King Oil Co.....	5.00
Abbott Lawrence	53.50
Liberty Square Market.....	19.50
E. F. & G. A. Maker.....	10.00
J. J. McCann.....	9.00
D. P. McKenna.....	20.95
E. A. McQuade & Co.....	2.85
Merrimack Utilization Co.....	22.00
Willard M. Morrison.....	24.00
D. L. Page Co.....	24.58
Pawtucketville Cash Grocery.....	35.00
Amasa Pratt Co.....	10.44
Pratt & Forrest Co.....	1.48
O. F. Prentiss.....	1.50
F. E. Putnam.....	2.35
Colvin W. Qua.....	1.00
Harry Raynes	16.75
Regan & Kirwin.....	2.00
Richardson Hotel	12.95
Sampson & Murdoek Co.....	3.00
Scripture's Laundry	175.13
J. H. Sparks.....	42.00
T. A. D. Sullivan & Co.....	22.00

For Sundries:—Continued

Talbot Dye & Chem. Co.....	108.39	
John A. Thomson & Co.....	1.25	
The Underhill Co.....	17.65	
Charles E. Walsh.....	44.20	
Welch Bros.	2.75	
Wm. E. Westall.....	36.85	
H. F. Whiting.....	7.30	
B. H. Wiggin Co.....	1.76	
Geo. H. Wood.....	20.00	
J. H. Woodward Co.....	8.00	
Sam Yafa	3.00	
		<hr/>
		1,785.86
		<hr/>
		\$29,790.61
		<hr/>

UNDERGROUND WIRES.

Appropriation	\$ 3,000.00	
	<hr/>	\$ 3,000.00

Expended

Adams Express Co.....	\$ 1.21	
H. R. Barker Mfg. Co.....	32.75	
Boutwell Bros. ....	.90	
L. A. Derby & Co.....	13.60	
Farrell & Conaton.....	32.00	
Gamewell Fire Alarm Tel. Co.....	287.01	
C. H. Hanson & Co., Inc.....	11.50	
John Kelley & Co.....	40.14	
Lowell Machine Shop.....	2.45	
New York, New Haven & Hartford R. R.	.28	
New Eng. Tel. & Tel. Co.....	418.92	
Nichols Foundry Co.....	4.68	
Okonite Co.	2,104.30	
Amasa Pratt Co.....	8.41	
Tucke & Parker Co.....	15.39	
Welch Bros.	19.90	
	<hr/>	2,993.44
Returned to General Treasury Fund.....		6.56
		<hr/>
		\$ 3,000.00
		<hr/>

POLICE—UNDERGROUND WIRES.

Appropriation	\$ 4,000.00	
	<hr/>	\$ 4,000.00
		<hr/>

Expended

American Express Co.....	\$ 1.67	
Boston & Maine R. R.....	2.87	
F. M. Ferrin.....	873.68	
Gamewell Fire Alarm Tel. Co.....	48.60	
C. H. Hanson & Co.....	6.50	

Police—Underground Wires—Continued

C. McIntyre Co.....	4.00	
New Eng. Tel. & Tel. Co.....	166.22	
New York, New Haven & Hartford R. R.	1.20	
Okonite Co.	2,624.75	
	<hr/>	3,729.49
Balance to 1912.....		270.51
		<hr/>
		\$ 4,000.00

RIFLE RANGE**Wages**

Appropriation	\$ 624.00	
	<hr/>	\$ 624.00

Expended

For Wages:

To Sundry Persons.....	\$ 624.00	
	<hr/>	\$ 624.00

Other Expenses

Appropriation	\$ 1,700.00	
	<hr/>	\$ 1,700.00

Expended

App. Public Buildings.....	\$ 115.33	
Bay State M. R. A.....	87.80	
E. Bibeault	61.25	
Geo. Brunelle	11.73	
Edward Cawley	34.60	
City Institution for Savings.....	25.00	
Co. G, 6th Reg. M. V. M.....	205.42	
Co. K, 6th Reg. M. V. M.....	100.85	
C. B. Coburn Co.....	1.00	
Courier-Citizen Co.	6.30	
M. Decose	33.59	
T. Delisle	13.22	
Joseph Jalbert	517.60	
Lull & Hartford.....	63.75	
New Eng. Tel. & Tel. Co.....	40.20	
G. C. Prince & Son.....	29.92	
D. Roy	4.00	
Thompson Hardware Co.....	1.86	
Tucke & Parker Co.....	2.75	
Various persons, labor.....	212.35	
	<hr/>	\$ 1,568.52
Balance to 1912.....		131.48
		<hr/>
		\$ 1,700.00

BUILDING DEPARTMENT**Wages**

Appropriation	\$ 14,396.74	
	<u> </u>	\$ 14,396.74

Expended

To Sundry Persons, Carpenters, Painters....	\$ 14,396.74	
	<u> </u>	\$ 14,396.74

Other Expenses

Appropriation	\$ 9,668.67	
	<u> </u>	\$ 9,668.67

Expended

For Board of Horses:		
O. P. Davis.....	\$ 275.00	
Fred W. Jenness.....	2.00	
Lowell Coach Co.....	275.00	
J. H. Sparks.....	550.00	
	<u> </u>	1,102.00
For Shoeing Horses:		
James Blakely	\$ 39.85	
Gauthier & Lamire.....	4.50	
A. D. Mitten.....	43.70	
Geo. R. Morse.....	35.75	
Henry Reynolds	77.00	
J. H. Sparks.....	1.25	
	<u> </u>	202.05
For Paints, Oils, etc.:		
F. G. Baldwin.....	\$ 37.80	
Owen E. Brennan.....	123.60	
C. B. Coburn Co.....	105.00	
Early Paint Co.....	3.17	
	<u> </u>	269.57
For Express, Transportation, etc.:		
American Express Co.....	\$ 4.36	
A. Archambault	7.00	
Boston & Lowell Express Co.....	.15	
James Dow	4.50	
Frank M. Dowling.....	13.50	
Manchester & Concord Express Co.....	.55	
C. K. Miller.....	40.50	
N. Y., N. H. & H. R. R.....	.35	
	<u> </u>	70.91
For Carriages, Harnesses and Repairs:		
H. A. Racicot.....	\$ 18.00	
Salois & Leith.....	158.90	
J. H. Sparks.....	47.35	
	<u> </u>	224.25

For Plumbing, Pipe Fitting, etc.:

H. R. Barker Mfg. Co.....	\$ 119.79
Boston Engineers Supply Co.....	4.50
Carroll Bros.	23.50
T. Costello & Co.....	8.05
J. A. Cotter & Co.....	62.30
L. A. Derby & Co.....	5.75
H. S. Drury.....	115.02
Emond Bros.	39.84
D. F. Farrell.....	97.15
Farrell & Conaton.....	14.75
C. F. Hoisington & Son.....	93.23
John Kelley & Co.....	24.00
Arthur P. Knapp.....	46.53
Lowell Furnace Co.....	28.32
J. F. McMahon & Co.....	16.40
Mason Regulator Co.....	.63
Edward Meloy	200.00
Middlesex Machine Co.....	22.50
Monarch Steam Blower Co.....	25.00
M. J. Mullaney.....	231.56
Otis Elevator Co.....	38.55
Scannell Boiler Works.....	102.75
Scott & O'Day.....	1,180.79
E. T. Shaw Co.....	150.01
J. W. Stewart.....	152.00
Welch Bros.	369.37
H. H. Wilder Co.....	5.10
Wm. Wrigley & Co.....	42.67

 3,220.06

For Plastering, Roofing, Concrete, etc.:

E. Bibeault	\$ 39.20
Matthias F. Connor.....	6.30
B. F. Crosby & Co.....	5.48
J. L. Douglass & Co.....	266.10
Philip Ginty	105.96
D. T. Sullivan.....	12.00
E. A. & A. T. Smith.....	97.69

 532.73

For Lumber:

Burnham & Davis Lumber Co.....	\$ 506.06
Davis & Sargent Lumber Co.....	318.15
J. B. Goodwin.....	16.80
Charles E. Howe & Co.....	83.49
Lowell Casket Mfg. Co.....	53.25
Amasa Pratt Co.....	416.60
Pratt & Forrest Co.....	148.16

 1,604.51

For Stationery, Printing, etc.:

Carter's Ink Co.....	\$.76
Dumas & Co.....	39.63
Charles E. Galley.....	4.90
R. E. Judd.....	1.75
Osmond Long	7.50

For Stationery, Printing, etc.:—Continued

G. C. Prince & Son.....	15.45
Union Printing Co.....	120.71
Union Stamp Works.....	7.00

197.70

For Hardware, etc.:

Adams Hardware & Paint Co.....	\$ 1.23
F. G. Baldwin.....	11.11
Bartlett & Dow.....	39.65
John C. Bennett.....	1.12
W. W. Carey Co.....	2.00
C. B. Coburn Co.....	47.88
Empire Laundry Machine Co.....	15.90
C. E. Gee.....	84.13
H. C. Girard Co.....	74.23
C. F. Hoisington & Son.....	16.18
Rice & Co.....	7.67
Seannell Boiler Works.....	228.50
E. E. Smith Co.....	142.20
Thompason Hardware Co.....	48.85
John A. Thomson.....	8.55

729.20

For Sundries:

Edward J. Barrett.....	\$.60
P. Blanchard	27.00
C. B. Coburn Co.....	50.17
Cook, Taylor & Co.....	14.65
Courier-Citizen Co.	4.80
O. P. Davis.....	25.00
L. A. Derby & Co.....	4.38
Derby Desk Co.....	.75
Donovan Harness Co.....	.75
Allan Drury .....	.55
Charles E. Gee.....	8.44
Gilbride Co.	17.13
J. B. Goodwin.....	2.50
Harry F. Harding.....	129.24
C. H. Hanson & Co.....	10.00
Horne Coal Co.....	22.77
Arthur P. Knapp.....	5.50
L'Etoile Publishing Co.....	4.05
Liberty Square Market.....	.60
Lowell Coach Co.....	56.88
Lowell Electric Light Corp.....	219.98
Lowell Gas Light Co.....	81.45
Lowell Sun	4.65
Lowell Telegram	3.00
W. A. Mack Co.....	2.65
A. Mackenzie	13.90
Middlesex Machine Co.....	4.80
Moody Bridge Auto Co.....	29.25
New Eng. Electrical & Supply Corp.....	.48
New Eng. Tel. & Tel. Co.....	12.35
Park Hotel	11.00

For Sundries:—Continued

Richardson Hotel	5.00	
Robertson Co.	15.60	
Sampson & Murdock Co.....	3.00	
Sarre Bros. ....	.35	
E. E. Smith Co.....	14.00	
J. H. Sparks.....	53.85	
D. T. Sullivan.....	20.80	
Talbot Dye & Chemical Co.....	2.25	
John A. Thomson & Co.....	42.40	
Tucke & Parker Co.....	31.19	
Water Works Appo.....	26.20	
H. F. Whiting.....	9.68	
E. A. Wilson & Co.....	22.10	
	<hr/>	1,015.69
		9,168.67
Balance to 1912.....		500.00
		<hr/>
		\$ 9,668.67

WIRE DEPARTMENT**Salaries**

Appropriation	\$ 2,234.76	
	<hr/>	\$ 2,234.76

Expended

William R. Foster, Inspector.....	\$ 39.44	
W. H. Mahan, Inspector.....	1,569.32	
A. M. Wood, Clerk.....	626.00	
	<hr/>	\$ 2,234.76

Other Expenses

Appropriation	\$ 300.00	
	<hr/>	\$ 300.00

Expended

For Stationery, Printing, etc.:

E. Cryan	\$ 2.00	
Electrical Review Publishing Co.....	1.00	
C. E. Galley.....	6.80	
R. E. Judd.....	11.70	
G. C. Prince & Son.....	39.10	
	<hr/>	60.60

For Sundries:

Adams Express Co.....	\$.20	
American Express Co.....	.20	
L. A. Derby & Co.....	1.10	
Electrical Review Pub. Co.....	3.00	
M. S. Feindel.....	35.00	
Wm. R. Foster.....	1.80	
Wm. F. Foye.....	4.00	
H. L. Gonzales.....	1.50	

For Sundries:—Continued

W. C. Hineckley.....	.25	
W. H. Mahan.....	129.10	
C. K. Miller.....	20.25	
New Eng. Tel. & Tel. Co.....	1.53	
J. J. O'Connell.....	2.00	
O. W. Peabody.....	14.00	
F. E. Putnam.....	5.00	
Richardson Hotel	5.00	
Sampson & Murdock Co.....	3.00	
J. H. Sparks.....	2.00	
	<hr/>	228.93
		289.53
Returned to General Treasury Fund.....		10.47
		<hr/>

\$ 300.00

CITY SEALER**Salaries and Wages**

Appropriation	\$ 1,980.00	
	<hr/>	\$ 1,980.00

Other Expenses

Appropriation	\$ 750.00	
	<hr/>	\$ 750.00

Expended

For Stationery, Printing, etc.:

Baker Printing Co.....	\$ 38.75	
G. C. Prince & Son.....	26.42	
E. A. Rix.....	.53	
	<hr/>	65.70

For Sundries:

Otis Allen & Son.....	\$ 1.75	
Appro. Public Buildings.....	20.41	
C. B. Coburn Co.....	2.19	
Courier-Citizen Co.	3.30	
J. J. Donnelly.....	15.25	
Fairbanks Co.	1.35	
W. & L. E. Gurley.....	40.01	
C. H. Hanson & Co.....	246.70	
J. J. Hargraves.....	3.80	
W. E. Hatch.....	5.50	
Geo. E. Hutchins.....	1.25	
Knowles Scale Works.....	14.45	
Lowell Sun	2.70	
F. T. Mussey Towel Supply Co.....	1.20	
J. H. Sparks.....	2.00	
Tyler A. Stevens.....	28.58	
George H. Taylor.....	230.82	
William E. Westall.....	7.00	
D. Whiting & Son.....	50.00	
D. H. Wilson & Co.....	.75	
	<hr/>	679.01

744.71

Returned to General Treasury Fund.....	5.29
	<u>\$ 750.00</u>

MOTH & BEETLE EXTERMINATION

Appropriation	\$ 8,675.12	
	<u> </u>	\$ 8,675.12

Expended

For Wages:		
To Sundry Persons.....	\$ 8,201.34	
For Stationery, Printing, etc.:		
Dumas & Co.....	\$ 16.25	
G. C. Prince & Son, Inc.....	16.00	
	<u> </u>	32.25
For Hardware, etc.:		
Bartlett & Dow.....	\$ 25.92	
C. B. Coburn Co.....	1.47	
C. N. Rice.....	.75	
	<u> </u>	28.14
For Sundries:		
App. Parks, O. E.....	\$ 254.00	
American Express Co.....	.85	
Arthur G. Beharrell.....	9.75	
Boston & Maine R. R.....	1.73	
Fred C. Church.....	58.94	
C. B. Coburn Co.....	79.03	
L. A. Derby & Co.....	3.05	
Lowell Coach Co.....	.70	
New Eng. Tel. & Tel. Co.....	1.64	
Tucke & Parker Co.,.....	1.50	
Charles A. Whittet.....	2.20	
	<u> </u>	413.39
		<u>\$ 8,675.12</u>

CARE OF TREES

Appropriation	\$ 1,000.00	
	<u> </u>	\$ 1,000.00

Expended

For Wages:		
To Sundry Persons.....	\$ 668.57	
	<u> </u>	668.57
For Sundries:		
Adams Hardware & Paint Co.....	\$ 50.34	
American Express Co.....	.55	
App. Parks, O. E.....	45.00	
Bartlett & Dow.....	30.65	
John C. Bennett.....	55.50	

For Sundries:—Continued

E. P. Bryant.....	1.25	
Fred C. Church.....	50.00	
C. B. Coburn Co.....	14.98	
Dumas & Co.....	17.29	
C. N. Rice.....	23.45	
Thompson Hardware Co.....	39.42	
John Wiley & Sons.....	3.00	
	<hr/>	331.43
		<hr/>
		\$ 1,000.00
		<hr/>

FISH WARDEN

Appropriation	\$ 40.00	
	<hr/>	\$ 40.00

Expended

To James Keefe.....	\$ 39.67	
To George Spence.....	.33	
	<hr/>	\$ 40.00
		<hr/>

POUND KEEPER

Appropriation	\$ 5.00	
	<hr/>	\$ 5.00

Expended

To O. W. Peabody.....	\$ 5.00	
	<hr/>	\$ 5.00
		<hr/>

BUILDING FUND

Balance January 1, 1911 (Book Account)....	\$49,708.00	
	<hr/>	\$49,708.00
		<hr/>
Balance to 1912 (Book Account).....	\$49,708.00	
	<hr/>	\$49,708.00
		<hr/>

SMOKE INSPECTOR

Appropriation	\$ 100.00	
	<hr/>	\$ 100.00
		<hr/>

Expended

Bay State St. Ry.....	\$ 15.00	
Boston & Northern St. Ry. Co.....	25.00	
H. L. Gonzales.....	3.00	
John F. Hollowood.....	20.30	
T. F. McCarthy.....	11.00	
J. A. McEvoy.....	1.10	

Smoke Inspector—Continued

New England Engineer.....	.50	
Henry W. O'Brien.....	2.00	
G. C. Prince & Son.....	11.90	
	<hr/>	89.80
Returned to General Treasury Fund.....		10.20
		<hr/>
	\$	100.00
		<hr/>

CHIEF'S AUTOMOBILE

Appropriation	\$ 2,000.00	
	<hr/>	\$ 2,000.00
		<hr/>

Expended

To Knox Automobile Co.....	\$ 2,000.00	
	<hr/>	\$ 2,000.00
		<hr/>

REBUILDING RACE ST. FIRE HOUSE

Appropriation	\$20,000.00	
	<hr/>	\$20,000.00
		<hr/>

Expended

For Wages:		
To Sundry Persons.....	\$ 67.02	
	<hr/>	67.02
For Sundries:		
App. Engineering	\$ 16.50	
App. Public Buildings.....	12.41	
	<hr/>	28.91
Courier-Citizen Co.	9.60	
Gamewell Fire Alarm Tel. Co.....	75.00	
Harry Prescott Graves.....	594.67	
C. H. Hanson & Co.....	2.50	
John Kelly & Co.....	68.75	
L'Etoile Publishing Co.....	3.60	
Lowell Sun	18.00	
Lowell Telegram	3.00	
E. A. & A. T. Smith.....	137.48	
Edward G. Twohey.....	13,158.40	
	<hr/>	14,166.93
Balance to 1912.....		5,833.07
		<hr/>
	\$	20,000.00
		<hr/>

DROWNING APPARATUS

Appropriation	\$ 200.00	
	<hr/>	\$ 200.00
		<hr/>

Expended

For Sundries:

Appro. Public Buildings, Wages.....	\$	47.78
Appro. Public Buildings, O. E.....		20.32
W. P. Brazer & Co.....		35.00
C. B. Coburn Co.....		9.95
Arthur P. Knapp.....		7.40
A. S. Morse Co.....		49.52
C. W. Warner.....		30.00

199.97

Returned to General Treasury Fund.....

.03

\$ 200.00**FIRE HOUSE IMPROVEMENTS**

Appropriation	\$ 2,250.00	
		<u>\$ 2,250.00</u>

For Wages:

To Sundry Persons.....	\$	921.48
------------------------	----	--------

921.48

For Sundries:

Bartlett & Dow.....	\$	21.64
Burnham & Davis Lumber Co.....		94.11
C. B. Coburn Co.....		.80
J. Jalbert		175.01
John Marinel		8.00
Pomeroy & Fischer.....		39.73
A. Pratt Co.....		91.54
E. T. Shaw Co.....		284.14
D. T. Sullivan.....		5.00

719.97

1,641.45

Balance to 1912.....

608.55

\$ 2,250.00

3. HEALTH AND SANITATION

Health	Sewer Maintenance
Milk Inspection	Sewer Construction
Inspector Animals	Contagious Hospital

HEALTH OFFICE

Salaries and Wages

————— \$ 10,616.00

Expended

For Board of Health:

Appropriation	\$ 10,616.00	
J. A. Osgood.....	\$ 500.00	
G. F. Martin.....	48.52	
D. J. Murphy.....	500.00	
Pierre Brunelle	451.48	
	—————	1,500.00
To Fred A. Bates, Agent.....	1,820.00	
Thomas B. Smith, Bacteriologist.....	600.00	
	—————	2,420.00

For Clerks:

Catherine Snow, Registrar.....	\$ 728.00	
	—————	728.00
To Sundry Persons.....	\$ 5,968.00	
	—————	\$ 5,968.00
		\$ 10,616.00

Other Expenses

Appropriation	\$ 7,436.40	
	—————	\$ 7,436.40

Expended

For Stationery, Printing, etc.:

A. H. Andrews.....	\$ 3.00
Butterfield Printing Co.....	26.25
Carter's Ink Co.....	.75
Courier-Citizen Co.	109.60
E. J. Cryan.....	10.55
A. B. Dick Co.....	.56
Dumas & Co.....	23.25
R. E. Judd.....	.20
H. C. Kittredge.....	1.50
Lawler Printing Co.....	75.50
L'Etoile Publishing Co.....	8.70
Library Bureau	3.00

For Stationery, Printing, etc.:—Continued

Lowell Sun	14.40
Lowell Telegram	7.50
T. F. McCarthy.....	8.00
G. C. Prince & Son.....	62.19
Charles S. Proctor.....	1.00
F. A. M. Tobin's Printery.....	73.00
Union Printing Co.....	33.47
M. G. Wight & Co.....	3.75

 466.17

For Laboratory Supplies:

Dr. H. M. Alexander & Co.....	\$ 32.50
F. & E. Bailey & Co.....	4.00
C. B. Coburn Co.....	3.00
Eimer & Amend.....	25.57
J. R. Fallon.....	8.00
J. A. B. Johnson.....	3.25
R. J. Lang & Co.....	37.85
D. O'Brien	4.10
Talbot Dye & Chemical Co.....	11.88

 130.15

For Professional Services:

D. S. Bellehumeur.....	\$ 20.00
A. E. Bertrand.....	6.00
J. F. Boyle.....	2.00
M. D. Bryant.....	4.00
A. R. Gardner.....	17.20
T. Halloran	46.00
A. J. Halpin.....	45.00
L. Huntress	5.00
H. W. Jewett.....	41.00
W. A. Johnson.....	412.00
J. E. Leary.....	10.00
E. G. Livingston.....	4.00
J. H. Meehan.....	1.00
P. J. Meehan.....	17.00
F. P. Murphy.....	74.00
J. B. O'Connor.....	19.00
T. B. Smith.....	128.00

 381.20

For Express, Transportation, etc.:

Adams Express Co.....	\$.70
American Express Co.....	7.95
Boston & Maine R. R.....	40.25
Boston & Northern St. R. R.....	30.00
F. A. Bates.....	16.50
Bay State St. Ry. Co.....	10.00
Manchester & Concord Express Co.....	.80
Mercier's Auto Delivery.....	8.00
J. H. Sparks.....	5.00

 119.20

Care of Patients in Hospitals, etc.:

Central Elm Sanatorium.....	\$ 101.01
Children's Hospital	7.60
City of Boston.....	233.14
City of Cambridge.....	25.71
City of Haverhill.....	40.00
City of Lynn.....	62.04
City of Salem.....	153.50
City of Worcester.....	55.72
Commonwealth of Massachusetts.....	212.40
Lowell Hospital	142.32
Mass. State Sanatorium.....	117.12
No. Reading State Sanatorium.....	1,245.33
Rutland Sanatorium	1,326.99
St. John's Hospital.....	334.00

 4,066.88

For Sundries:

Appro. Charity, Hospital.....	\$ 629.87
Appro. Charity, O. D. R.....	61.35
Appro. Public Buildings.....	25.92
Amadee Archambault	8.00
H. J. Arsenault.....	11.92
F. A. Bates.....	31.73
Bon Marche Dry Goods Co.....	1.25
John Brady	4.00
J. S. Brooks.....	88.71
H. C. Brown.....	2.00
Wm. H. Brown.....	16.00
C. B. Coburn Co.....	2.75
Courier-Citizen Co.	13.50
Commonwealth of Massachusetts.....	542.80
J. H. Corbett.....	2.00
D. Direuski	10.00
J. H. Dunham.....	37.00
Geo. M. Eastman.....	3.00
Everett Market	38.00
Fort Hill Market.....	1.00
Gilbride Co.	3.00
J. W. Green.....	7.00
B. W. Huebsch.....	1.50
Journal of American Public Health Association	3.00
J. A. Liberty.....	10.00
H. W. Locke.....	4.00
Lowell Hospital	13.93
Lowell Sun	2.40
W. A. Mack Co.....	5.75
Jas. W. McKenna.....	3.00
Kenneth D. McKinnon.....	17.31
Edward Martin	3.00
Mass. Association, Board of Health.....	6.00
Mercier's Auto Delivery.....	14.00
C. H. Molloy.....	3.00
Municipal Engineering Co.....	2.00

For Sundries:—Continued

Municipal Journal Engineers.....	3.00	
M. S. Netto.....	2.00	
New Eng. Tel. & Tel. Co.....	14.70	
Patrick Rourke	18.75	
Will Rounds	6.50	
Sampson & Murdock Co.....	6.00	
J. F. Saunders.....	48.02	
Rose Scott	16.00	
Stanley Coal & Transportation Co.....	8.00	
J. J. Sullivan.....	60.74	
John Sullivan	6.00	
T. A. D. Sullivan & Co.....	3.25	
Thompson Hardware Co.....	.15	
	<hr/>	1,822.80
		\$ 7,436.40

HEALTH YARD**Wages**

Appropriation	\$ 40,324.59	
	<hr/>	\$ 40,324.59

Expended

For Wages:

To Sundry Persons.....	\$ 40,324.59	
	<hr/>	\$ 40,324.59

Other Expenses

Appropriation	\$ 11,714.32	
	<hr/>	\$ 11,714.32

Expended

For Horses, Use of Horses, Teaming, etc.:

C. H. Hanson & Co.....	\$ 867.80	
Geo. N. Parker.....	675.00	
C. P. Salls.....	67.00	
J. H. Sparks.....	275.00	
Thomas Vaughan	15.00	
	<hr/>	1,899.80

For Water and Lighting:

App. Water Works.....	\$ 211.90	
Lowell Electric Light Corp.....	25.21	
Lowell Gas Light Co.....	54.44	
	<hr/>	291.55

For Hay, Grain, etc.:

Coffey Bros.	\$ 424.20	
J. B. Cover & Co.....	175.81	
W. M. Graves.....	547.89	
E. E. McCauslin.....	377.66	
T. J. McDonald.....	34.54	
Joseph Mullin	1,949.33	
G. W. Parker.....	1,041.77	
John J. Sullivan.....	1.20	

For Hay, Grain, etc.:—Continued

Paul Vigeant & Co.....	114.32
C. E. Walsh.....	80.43
Wilder & Wotton.....	1,413.14
D. J. Williams.....	118.70

6,278.99

For Paints, Oils, etc.:

John C. Bennett.....	12.00
Boston Engineers Supply Co.....	52.44
Canco's Mfg. Co.....	3.00
C. B. Coburn Co.....	7.85
H. C. Girard Co.....	4.85
E. E. Smith Co.....	24.80

104.94

For Hardware, Fittings, etc.:

Adams Hardware & Paint Co.....	\$ 2.55
Bartlett & Dow.....	1.90
J. C. Bennett.....	17.10
Boutwell Bros.	642.51
Owen E. Brennan.....	13.80
Carroll Bros.	1.25
H. C. Girard Co.....	2.80
W. A. Mack Co.....	22.98
Scannell Boiler Works.....	6.10
E. E. Smith Co.....	15.00
Thompson Hardware Co.....	.80
D. H. Wilson & Co.....	22.10

748.89

For Carriages, Harnesses and Repairs:

A. H. Cluer.....	\$ 8.45
Donovan Harness Co.....	401.68
Thomas F. Garvey.....	.85
P. A. Mackenzie.....	15.63
Sawyer Carriage Co.....	31.70
J. H. Sparks.....	4.00

462.31

For Fuel, Cement, etc.:

J. Brady	\$ 50.15
A. A. Brown.....	134.75
Edward Cawley	103.68
Horne Coal Co.....	41.59
Jos. Mullin	15.20
Fred H. Rourke.....	14.00
E. A. Wilson & Co.....	7.35

366.72

For Sundries:

App. Public Buildings Department.....	\$ 7.49
Baron & Roll.....	10.50
Boston & Maine R. R.....	.52
J. S. Brooks.....	.40
Burnham & Davis Lumber Co.....	76.60
C. B. Coburn Co.....	10.90
Coffey Bros.	4.00
Connors Bros. Co.....	218.75

For Sundries:—Continued

Davis & Sargent Lumber Co.....	27.25	
J. L. Fairbanks & Co.....	7.56	
Falls & Burkinshaw.....	182.40	
Daniel Gage	26.97	
Gilbride Co.	12.00	
W. C. Hamblet.....	24.75	
C. M. Holmes.....	.75	
G. E. Hutchins.....	9.00	
Kennedy & Co.....	4.80	
R. J. Lang & Co.....	5.00	
Lawler Printing Co.....	12.75	
T. C. Lee & Co.....	25.00	
Liberty Square Market.....	7.50	
Lowell Laundry	49.12	
D. P. McKenna.....	4.75	
F. E. McNabb.....	2.10	
E. A. McQuade.....	28.14	
Charles E. Munn.....	6.00	
New Eng. Tel. & Tel. Co.....	.10	
O'Sullivan Bros. Co.....	1.25	
A. S. Parker.....	265.65	
Geo. N. Parker.....	229.42	
Amasa Pratt Co.....	177.17	
Fred M. Prescott.....	6.00	
Martin Rock	4.00	
M. Senecal	14.00	
W. A. Sherman.....	23.00	
Samuel Silverblatt	25.00	
J. H. Sparks.....	6.00	
J. J. Sullivan.....	3.43	
T. A. D. Sullivan.....	.75	
Talbot Dye & Chem. Co.....	7.35	
Thomas Vaughn	10.00	
D. W. Walker.....	9.50	
Charles E. Walsh.....	13.50	
	<hr/>	1,561.12
		<hr/>
		\$11,714.32
		<hr/>

MILK INSPECTION**Salaries and Wages**

Appropriation	\$ 2,204.00	
	<hr/>	\$ 2,204.00

Expended

To Melvin F. Master, Inspector.....	\$ 1,500.00	
James E. Hill, Collector.....	702.00	
	<hr/>	2,202.00
Returned to General Treasury Fund.....		2.00
		<hr/>
		\$ 2,204.00
		<hr/>

Other Expenses

Appropriation	\$	375.00	
		<hr/>	\$ 375.00

Expended

For Stationery, Printing, etc.:

Buckland Printing Co.....	\$	5.75
Courier-Citizen Co.		33.25
E. J. Cryan.....		1.00
Lawler Printing Co.....		12.00
T. F. McCarthy.....		5.25
G. C. Prince & Son.....		8.50
F. A. M. Tobin's Printery.....		12.50

78.25

For Laboratory Supplies:

Eimer & Amend.....	\$	59.75
Hall & Lyon Co.....		.30
R. J. Lang & Co.....		2.10
Lorenz Model Co.....		12.75
McGraw Hill Book Co.....		5.00
Mass. Agricultural Ex. Station.....		.95
Melvin F. Master.....		2.93
Louis F. Nafis.....		1.25
Talbot Dye & Chem. Co.....		7.14
John Wiley & Sons.....		3.00
Williamstown Glass Co.....		32.76

127.93

For Sundries:

Adams Hardware & Paint Co.....	\$	4.20
American Express Co.....		2.90
H. R. Barker Mfg. Co.....		.30
C. B. Coburn Co.....		.11
Conway Transfer Co.....		.50
W. A. Mack Co.....		1.45
Manchester & Concord Express Co.....		.65
Melvin F. Master.....		11.99
New Eng. Tel. & Tel. Co.....		41.73
O'Donnell Dry Goods Co.....		6.50
Sampson & Murdock Co.....		3.00
Sawyer Carriage Co.....		6.90
Rose A. Scott.....		20.00
T. A. D. Sullivan.....		3.25
Tucke & Parker Co.....		21.75
D. Van Nestrand Co.....		1.25

126.48

Balance returned to General Treasury Fund

332.66

42.34

\$ 375.00

INSPECTOR OF ANIMALS**Salary**

Appropriation	\$ 500.00	
	<u> </u>	\$ 500.00

Expended

To W. A. Sherman, Inspector.....	\$ 500.00	
	<u> </u>	\$ 500.00

Other Expenses

Appropriation	\$ 23.25	
	<u> </u>	\$ 23.25

Expended

For Sundries:

Talbot Dye & Chem. Co.....	\$ 20.25	
F. A. M. Tobin's Printery.....	3.00	
	<u> </u>	\$ 23.25

SEWER MAINTENANCE**Wages**

Appropriation	\$ 15,219.29	
	<u> </u>	\$ 15,219.29

Expended

To Sundry Persons.....	\$ 15,219.29	
	<u> </u>	\$ 15,219.29

Other Expenses

Appropriation	\$ 5,449.92	
	<u> </u>	\$ 5,449.92

Expended

For Carriages, Harnesses and Repairs:

Donovan Harness Co.....	\$ 10.50	
Samuel Fleming	23.15	
Sawyer Carriage Co.....	3.00	
	<u> </u>	36.65

For Lumber:

Burnham & Davis Lumber Co.....	\$ 297.52	
Davis & Sargent Lumber Co.....	82.74	
Amasa Pratt Co.....	702.57	
Burton H. Wiggin.....	30.28	
	<u> </u>	1,113.11

For Hardware, Tools, etc.:

Adams Hardware & Paint Co.....	\$ 11.07	
H. R. Barker Mfg. Co.....	.30	
Bartlett & Dow.....	199.78	
W. T. S. Bartlett.....	15.23	
J. C. Bennett.....	16.30	
Boston Engineers Supply Co.....	58.50	

For Hardware, Tools, etc.:—Continued

Boutwell Bros.	22.69	
Owen E. Brennan.....	32.61	
Carroll Bros.	4.96	
C. B. Coburn Co.....	49.35	
L. A. Derby & Co.....	3.08	
Doherty Bros.	653.43	
A. J. Harris & Co.....	22.36	
W. H. Hope Co.....	2.50	
W. A. Mack Co.....	53.89	
Wm. McLarney & Co.....	1.00	
Middlesex Machine Co.....	3.60	
Park Hotel	6.20	
Rice & Co., Inc.....	7.20	
Jas. P. Robinson Iron Foundry.....	83.07	
Scannell Boiler Works.....	18.28	
E. E. Smith.....	5.50	
John A. Thomson Co.....	63.75	
Thompson Hardware Co.....	6.66	
Union Iron Foundry.....	64.05	
Charles E. Walsh.....	1.80	
H. H. Wilder & Co.....	3.10	
Water Works App.....	159.49	
		<hr/>
		1,569.75

For Brick, Cement, Fuel, etc.:

Edward Cawley	\$	123.63	
Horne Coal Co.....		46.79	
Fred H. Rourke.....		7.00	
D. T. Sullivan.....		7.00	
E. A. Wilson & Co.....		168.96	
			<hr/>
			353.38

For Sundries:

App. Engineering	\$	59.05	
App. Water Works.....		12.60	
B. Aronson		64.75	
F. G. Baldwin.....		24.30	
F. M. Bill & Co.....		4.25	
Boston Engineers Supply Co.....		528.28	
Boston & Maine R. R.....		2.00	
Buckland Printing Co.....		11.00	
Butterfield Printing Co.....		69.25	
Carroll Bros.		2.12	
A. A. Clark.....		73.90	
C. B. Coburn Co.....		222.26	
J. B. Cover Co.....		74.75	
Cross Awning & Sign Co.....		70.00	
Donovan Harness Co.....		3.75	
J. L. Douglas & Co.....		52.50	
Charles M. Erskine, Agt.....		37.00	
Patrick Fitzgibbons		7.00	
Samuel Fleming		1.00	
Wm. F. Foye Co.....		14.00	
Daniel Gage		11.26	
Philip Goldman		2.10	

For Sundries:—Continued

James E. Gorman.....	39.25
C. H. Hanson & Co.....	47.50
W. C. Hinekley.....	11.39
Horne Coal Co.....	131.04
Geo. E. Hutchins.....	55.25
Lowell Coach Co.....	10.00
Lowell Electric Light Corp.....	53.26
Lowell Gas Light Co.....	2.50
Lowell Waste Co.....	10.70
Manchester & Concord Express Co.....	.30
E. E. McCauslin.....	1.05
Ed. H. Mercier.....	8.00
Mercier's Auto Livery.....	10.00
Merrimack Utilization Co.....	12.00
Geo. E. Mongeau.....	20.50
Joseph Mullin	20.00
New Eng. Electric & Supply Corp.....	40.90
O'Sullivan Bros. Co.....	68.75
Park Hotel	23.75
D. W. Parker.....	1.75
Parker Bros.	5.00
A. G. Pollard Co.....	3.30
G. C. Prince & Son.....	.50
E. A. & A. T. Smith.....	1.50
T. B. Sullivan.....	24.00
Sunlight Shoe Store.....	39.00
Talbot Dye & Chem. Co.....	1.31
J. A. Thomson & Co.....	42.00
Charles E. Walsh.....	.25
F. L. Weaver & Son.....	8.10
Wilder & Wotton.....	38.00
E. A. Wilson & Co.....	108.43
W. M. & H. M. Wilson.....	75.00
Wm. Zimmer .....	.25
	<hr/>
	2,261.65

5,334.54

Returned to General Treasury Fund.....

115.38

\$ 5,449.92

SEWER CONSTRUCTION

Appropriation	\$ 70,041.20	
	<hr/>	\$ 70,041.20

Expended

For Labor:

To Sundry Persons.....	\$ 38,934.34	
	<hr/>	\$ 38,934.34

For Cement, Pipe, etc.:

Carroll Bros.	\$ 22.55
Edward Cawley	93.79
Horne Coal Co.....	25.02

For Cement, Pipe, etc.:—Continued

Middlesex Machine Co.....	1.35	
D. T. Sullivan.....	2,616.06	
Water Works App.....	32.69	
E. A. Wilson & Co.....	3,318.70	
	<hr/>	6,110.16

For Hardware, Fittings, etc.:

Doherty Bros.	\$ 1,171.96	
John Kelley & Co.....	296.90	
Lowell Gas Light Co.....	8.51	
John A. Thomson.....	377.85	
Water Works App.....	53.36	
	<hr/>	1,908.58

For Sundries:

App. Engineering	\$ 1,856.01	
App. Sewer Main, O. E.....	1,806.18	
App. Sewer Main., Wages.....	283.37	
App. Water Works.....	9.61	
Burnham & Davis Lumber Co.....	295.47	
C. B. Coburn Co.....	5.25	
C. H. Hanson & Co.....	58.75	
Horne Coal Co.....	172.26	
George Marcheldon	82.50	
E. A. & A. T. Smith.....	16.00	
D. T. Sullivan.....	197.40	
E. A. Wilson & Co.....	364.66	
	<hr/>	5,147.46

Balance to 1912.....

\$ 52,100.54
 17,940.66

\$ 70,041.20

SCHOOL INSPECTION

Appropriation	\$ 820.00	
	<hr/>	\$ 820.00

Expended

For Labor:

To Sundry Persons.....	\$ 800.00	
	<hr/>	800.00

Returned to General Treasury Funds..... 20.00

\$ 820.00

CONTAGIOUS HOSPITAL

Appropriation	\$ 1,000.00	
	<hr/>	\$ 1,000.00

For Sundries:

Expended

Courier-Citizen Co.	\$ 7.20	
Lowell Sun	2.25	
G. F. Martin.....	10.65	
L. A. Nicol.....	28.83	
	<hr/>	48.93

Balance to 1912..... 951.07

\$ 1,000.00

4. HIGHWAYS AND BRIDGES

Streets	Paving Aiken Street
New Sidewalks	Macadamizing Summit, North,
Street Watering	Otis, Washington, Parts of
Street Lighting	Stackpole, Mansur, Dalton,
State Highway Tax	West Sixth, Riverside, Bourne,
Congress and Billerica Street	Moody and Lilley Avenue
Bridge	Repairing and Painting Bridges
Extension Stromquist Ave.	East Merrimack Street, Jef-
Lawrence Street Bridge, Meadow	ferson Street, Aiken Street,
Brook	Market Street and Cambridge
Shaw Street Extension	Street
Paving Gorham, Dutton, Merri-	Paving East Merrimack Street
mack, Merrimack Square, East	(Howe to Fayette)
Merrimack & Middlesex Streets	

STREET DEPARTMENT

Salaries and Wages

Appropriation	\$139,035.25	
		<u>\$139,035.25</u>

Expended

Newell F. Putnam, Superintendent.....	\$ 2,000.00	
George W. Hartwell, Assist. Supt.....	1,400.00	
Clarence H. Raymond.....	402.85	
Clinton P. Tuttle.....	209.84	
To Sundry Persons.....	135,022.56	
		<u>\$139,035.25</u>

Other Expenses

Appropriation	\$ 72,010.93	
		<u>\$ 72,010.93</u>

Expended

For Paints, Oils, etc.:		
Adams Hardware & Paint Co.....	\$	9.85
A. R. Andrews.....		3.00
W. T. S. Bartlett.....		1.25
S. Bean		20.93
Boston Engineers Supply Co.....		408.75
Owen E. Brennan.....		23.10
Canco's Mfg. Co.....		45.25
C. B. Coburn Co.....		666.10
Geo. R. Dana.....		1.30

For Paints, Oils, etc.:—Continued

Gulf Refining Co.....	21.50
Willard W. Morrison.....	7.50
E. E. Smith Co.....	2.25

1,210.78

For Gravel, Stone, Cement, Fuel, etc.:

Edward Cawley.....	\$ 258.75
Willis E. Dodge.....	169.35
J. L. Douglass & Co.....	2,342.98
H. V. Hildreth.....	85.63
Horne Coal Co.....	1,588.03
F. A. Malorey.....	399.46
John Marinel	87.55
Thomas Rafferty	240.37
F. H. Rourke.....	22.33
E. A. & A. T. Smith.....	8,123.81
Staples Bros.	25.04
D. T. Sullivan.....	129.70
James Walsh & Son.....	1,367.60
E. A. Wilson & Co.....	156.20

14,996.80

For Express, Transportation, etc.:

Adams Express Co.....	\$ 1.70
American Express Co.....	13.73
Boston & Lowell Express Co.....	.90
Boston & Maine R. R.....	220.32
Manchester & Concord Express Co.....	.45
C. K. Miller.....	20.25
New York, New Haven & Hartford R. R.	3,260.13
Newell F. Putnam.....	64.86

3,582.34

For Veterinary:

C. A. Hamblett.....	\$ 205.52
W. A. Sherman.....	6.00
J. H. Sparks.....	6.00

217.52

For Water, Lighting, Telephone, etc.:

App. Water Works.....	\$ 402.74
Lowell Electric Light Corp.....	304.99
Lowell Gas Light Co.....	110.77
P. F. Mahoney.....	4.62
New Eng. Tel. & Tel. Co.....	87.56

910.68

For Stationery, Printing, etc.:

Buckland Printing Co.....	\$ 60.50
Butterfield Printing Co.....	20.40
Courier-Citizen Co.	4.50
Edward Cryan	4.09
Dumas & Co.....	4.75
Charles E. Galley.....	.85
Lawler Printing Co.....	393.50
Charles E. May.....	8.17

For Stationery, Printing, etc.:—Continued

R. C. Paradis.....	2.75
G. C. Prince & Son.....	77.09
Union Printing Co.....	42.01

 618.61

For Hay, Grain, etc.:

H. Barsjoly	\$ 118.08
D. A. Blake.....	2,567.99
Jos. Bowers	474.83
Coffey Bros.	774.44
J. B. Cover & Co.....	1,060.09
Geo. B. Fuller.....	67.13
H. C. Jones.....	260.25
E. E. McCausland.....	224.69
T. J. McDonald.....	32.50
Enoch Mills	308.20
Jos. Mullin	2,680.86
J. W. Peabody.....	146.52
Paul Vigeant & Co.....	2,506.40
Wilder & Wotton.....	4,475.60

 15,697.58

For Carriages, Harnesses and Repairs:

Boutwell Bros.	\$ 15.51
W. W. Carey Co.....	8.40
Donovan Harness Co.....	1,037.35
Samuel Fleming .....	.60
C. H. Hanson & Co.....	13.25
P. A. Mackenzie.....	101.11
O'Sullivan Bros. Co.....	3.50
Sawyer Carriage Co.....	36.70
J. H. Sparks.....	.50

 1,216.92

For Teaming:

T. Beauchemin	\$ 90.00
A. Brown	123.75
Thomas Carroll	47.50
Patrick Cogger	127.50
Connors Bros. Co.....	302.50
Geo. F. Fall.....	583.75
C. H. Hanson & Co.....	2,295.25
Horne Coal Co.....	272.50
A. B. Humphrey.....	280.00
T. G. Little.....	45.00
Geo. Marcheldon	148.30
Joseph Mullin	151.65
Thomas Oddie	10.00
Parker Bros.	411.35
Harry M. Parker.....	65.00
N. L. Pevey.....	91.25
J. P. Quinn.....	315.00
C. P. Salls.....	72.50
J. J. Smith.....	170.00
J. H. Sparks.....	36.00

For Teaming:—Continued

S. J. Spence.....	207.50
H. T. Wheeler.....	15.00
E. A. Wilson & Co.....	225.00

 6,086.30

For Lumber:

Burnham & Davis Lumber Co.....	\$ 1,012.08
Davis & Sargent Lumber Co.....	139.51
Charles E. Howe Co.....	58.58
Amasa Pratt Co.....	1,359.87
C. H. Trull.....	49.37
B. H. Wiggin.....	57.29

 2,676.70

For Hardware, Tools, etc:

Adams Hardware & Paint Co.....	\$ 169.81
App. Water Works.....	27.30
H. R. Barker Mfg. Co.....	.80
F. G. Baldwin.....	26.82
Bartlett & Dow.....	253.53
W. T. S. Bartlett.....	2.60
J. C. Bennett.....	45.51
A. B. R. T. Black Co.....	201.10
Black Road Machinery Co.....	6.00
Harold L. Bond Co.....	178.78
Boston Engineers Supply Co.....	1,679.71
Boutwell Bros.	2,919.36
Owen E. Brennan.....	241.69
Buffalo Steam Roller Co.....	84.67
Carroll Bros.	8.20
Clinton Wire Cloth Co.....	2.41
C. B. Coburn Co.....	61.03
Co-operative File Co.....	7.20
Crosby Steam Gage & Valve Co.....	.63
L. A. Derby & Co.....	1.75
Doherty Bros.	345.89
Farrell & Conaton.....	13.32
H. C. Girard Co.....	15.50
Good Roads Machinery Co.....	44.00
Hancock Inspirator Co.....	27.50
H. H. Harvey.....	10.37
C. F. Hoisington & Son.....	45.60
W. H. Hope Co.....	2.04
Chas. Hvass & Co.....	44.00
H. C. Jones.....	10.00
Lull & Hartford.....	2.50
W. A. Mack Co.....	54.51
P. A. Mackenzie.....	19.48
Wm. McLarney & Co.....	4.02
Middlesex Machine Co.....	85.05
New England Broom Co.....	18.00
W. S. Railsback.....	115.00
J. P. Robinson's Foundry.....	11.38
Sampson Draught & Spring Co.....	64.50
Seannell Boiler Works.....	75.45

For Hardware, Tools, etc.:—Continued

E. E. Smith Co.....	13.68	
Stanley Coal & Transportation Co.....	.50	
J. N. Stewart.....	40.40	
Thompson Hardware Co.....	165.52	
H. Thompson	13.44	
John A. Thomson & Co.....	379.86	
Upton & Gilman.....	14.88	
Welch Bros.	18.87	
H. H. Wilder & Co.....	3.00	
D. H. Wilson & Co.....	11.50	
	<hr/>	7,588.66

For Executions of Court:

Marie Louise Labranche.....	\$ 75.00	
Helen E. Estabrook.....	450.00	
	<hr/>	525.00

For Horses, Hire of Horses, etc.:

Philip H. Connell.....	\$ 21.00	
C. H. Hanson & Co.....	1,090.00	
H. J. O'Dowd.....	700.00	
	<hr/>	1,811.00

For Sundries:

American Asphaltum & Rubber Co.....	\$ 593.20	
App. Engineering	4,419.91	
App. Water Works.....	19.88	
A. G. Beharrell.....	1,009.31	
F. M. Bill & Co.....	4.50	
Black Road Machinery Co.....	30.00	
Boston Bridge Works.....	41.00	
Boston Engineers Supply Co.....	254.75	
Buffalo Steam Roller Co.....	6.25	
Cancos Mfg. Co.....	15.50	
W. W. Carey Co.....	2.20	
City Hall Garage.....	181.08	
C. B. Coburn Co.....	54.32	
Humphrey Coffey	2.45	
F. W. Cragin & Co.....	.50	
Crandall Packing Co.....	43.05	
Walter Cressy	481.50	
L. A. Derby & Co.....	1.25	
W. E. Dodge.....	52.50	
Patrick Fitzgibbon	7.00	
Samuel Fleming	7.40	
Wm. F. Foye & Co.....	12.00	
Daniel Gage	83.56	
Charles F. Gee.....	2.60	
H. C. Girard Co.....	9.60	
Gilbride Co.	8.85	
Thomas J. Goyette.....	5.25	
Arthur L. Gray.....	100.95	
Greenwood Bros.	3.96	
Greendale Gas & Engine Co.....	200.00	
C. H. Hanson & Co.....	9.13	
H. F. Harding.....	29.70	

For Sundries:—Continued

W. C. Hinckley.....	5.25
W. H. Hinckley.....	27.34
C. H. Hibbard.....	3.18
Geo. E. Hutchins.....	87.03
A. Hussey	25.00
Charles D. Kent.....	7.50
L. S. Kimball.....	4.20
T. C. Lee & Co.....	50.00
L'Etoile Publishing Co.....	1.80
Lowell Hospital Association.....	15.00
Lowell Sun	18.45
Lowell Textile School.....	12.00
Lowell Waste Co.....	24.10
Lull & Hartford.....	3.10
W. A. Mack Co.....	14.65
Geo. E. Maker.....	8.00
Geo. Marcheldon	70.00
T. J. McDonald.....	25.00
Geo. McKerwin	10.00
F. E. McNabb.....	79.05
Ed. H. Mercier.....	27.00
Mercier's Auto Livery.....	42.00
J. V. Meigs.....	44.00
Merrimack Utilization Co.....	119.04
Merrimack Valley Auto Co.....	1.00
Middlesex Machine Co.....	.29
Moody Bridge Auto Co.....	17.50
Edward Moran	50.00
W. W. Morrison.....	6.00
Jas. Murkland & Son.....	23.80
F. T. Mussey.....	60.00
Geo. A. Nelson.....	11.25
New Eng. Brook Co.....	215.00
R. C. Nichols.....	17.04
O'Donnell Dry Goods Co.....	3.00
O'Sullivan Bros. Co.....	46.75
Park Hotel	21.00
Paving Cutters	2,430.00
Wm. Perley	5.00
A. G. Pollard Co.....	2.75
N. F. Putnam.....	27.20
C. N. Rice.....	.60
Rice & Co., Inc.....	11.00
Richardson Hotel	51.40
Sampson & Murdock Co.....	6.00
St. John's Hospital.....	19.00
T. B. Smith, M. D.....	8.50
J. H. Sparks.....	3.90
E. R. Springer.....	40.00
J. J. Sullivan.....	9.85
Talbot Dye & Chem. Co.....	8.55
Town of Chelmsford.....	2.00
Upton & Gilman.....	.93

For Sundries:—Continued

Charles E. Walsh.....	9.36	
F. L. Weaver & Son.....	4.05	
Welch Bros.	7.94	
Waverly Hotel	8.50	
J. T. Williamson.....	.25	
Wm. Zimmer .....	.45	
	<hr/>	11,545.70

	\$ 68,984.34
Returned to General Treasury Fund.....	3,026.34
	<hr/>
	\$ 72,010.93

NEW SIDEWALKS

Appropriation	\$ 6,931.83	
	<hr/>	\$ 6,931.83

Expended

For Labor:

To Sundry Persons.....	\$ 2,109.48	
	<hr/>	\$ 2,109.48

For Sundries:

Boston & Maine R. R.....	\$ 134.32	
Burnham & Davis Lumber Co.....	11.31	
J. L. Douglas & Co.....	443.09	
John Marinel	2,995.13	
Thomas Rafferty	134.09	
E. A. & A. T. Smith.....	743.18	
Jas. Walsh & Son.....	347.65	
	<hr/>	4,808.77

	6,918.25
Returned to General Treasury Fund.....	13.58
	<hr/>
	\$ 6,931.83

STREET WATERING**Wages**

Appropriation	\$ 5,734.11	
	<hr/>	\$ 5,734.11

Expended

For Labor:

To Sundry Persons.....	\$ 5,734.11	
	<hr/>	\$ 5,734.11

Other Expenses

Appropriation	\$ 15,156.19	
	<hr/>	\$ 15,156.19

AUDITOR'S REPORT

Expended

App. Engineering	\$ 225.81	
App. Streets, O. E.....	2,940.00	
App. Water Works.....	1,847.87	
American Car Sprinkler Co.....	10,007.75	
Boston Engineers Supply Co.....	32.00	
Charles E. Gee.....	2.70	
C. H. Hanson & Co.....	1.50	
Lowell Electric Light Corp.....	74.92	
Middlesex Machine Co.....	1.14	
Union Printing Co.....	22.50	
		<u>15,156.19</u>

STREET LIGHTING

Appropriation	\$101,039.25	
		<u>\$101,039.25</u>

Expended

For Lighting Streets:		
Lowell Electric Light Corp.....	\$ 67,989.02	
Lowell Gas Light Co.....	32,084.86	
		<u>100,073.88</u>
For Lighting Public Buildings:		
Lowell Gas Light Co.....	\$ 22.23	
		<u>22.23</u>
For Corp. St. Lights:		
Lowell Gas Light Co.....	\$ 132.67	
		<u>132.67</u>
For Sundries:		
Courier-Citizen Co.	12.00	
Dumas & Co.....	40.55	
Lowell Gas Light Co.....	27.09	
G. C. Prince & Son.....	21.95	
E. A. & A. T. Smith.....	.50	
Union Printing Co.....	3.25	
		<u>105.34</u>
		<u>100,334.12</u>
Returned to General Treasury Fund.....		<u>705.13</u>
		<u>\$101,039.25</u>

STATE HIGHWAY TAX

Appropriation	\$ 115.00	
		<u>\$ 115.00</u>

CONGRESS & BILLERICA ST. BRIDGE

Appropriation	\$ 7,245.47	
		<u>\$ 7,245.47</u>

Expended

For Sundries:

Boston & Maine R. R.....	\$ 5,245.17	
Boutwell Bros.	70.53	
Carroll Bros.	91.00	
	<hr/>	5,406.70

Balance to 1912..... 1,838.77

\$ 7,245.47

LAWRENCE ST. BRIDGE

Appropriation \$ 11,913.80
\$ 11,913.80

Expended

For Labor:

To Sundry Persons.....	\$ 6,596.35	
	<hr/>	\$ 6,596.35

For Stone, Cement, etc.:

Edward Cawley	\$ 306.98	
D. T. Sullivan.....	552.87	
E. A. Wilson & Co.....	97.19	
Winchester Rock & Brick Co.....	140.36	
	<hr/>	1,097.40

For Hardware, etc.:

J. C. Bennett.....	\$.50	
Boutwell Bros.	211.27	
Carroll Bros.	10.20	
Middlesex Machine Co.....	44.39	
Scannell Boiler Works.....	2.00	
E. E. Smith Co.....	7.80	
Thompson Hardware Co.....	6.14	
	<hr/>	282.30

For Sundries:

App. Engineering.....	\$ 200.02	
App. Streets.....	2,869.00	
Boston & Maine R. R.....	152.91	
Burnham & Davis Lumber Co.....	92.65	
C. B. Coburn Co.....	7.98	
Lowell Electric Light Corp.....	73.55	
Wamesit Power Co.....	20.00	
W. H. Ward Co.....	57.00	
J. E. Williamson.....	.50	
	<hr/>	3,473.61

Balance to 1912..... 11,449.66
464.14

\$ 11,913.80

SHAW STREET EXTENSION

Balance January 1st, 1911.....	\$ 989.84	
	<u> </u>	\$ 989.84
Balance to 1912.....	\$ 989.84	
	<u> </u>	\$ 989.84

PAVING AIKEN STREET

Appropriation	\$ 6,500.00	
	<u> </u>	\$ 6,500.00

Expended

For Labor:		
To Sundry Persons.....	\$ 2,322.29	
	<u> </u>	2,322.29
For Sundries:		
App. Engineering.....	\$ 98.06	
App. Streets, O. E.....	1,474.14	
App. Streets, Wages.....	221.35	
Boston & Maine R. R.....	283.87	
C. B. Coburn Co.....	2.65	
F. A. Malorey.....	1,566.41	
D. T. Sullivan.....	483.39	
	<u> </u>	4,129.87
		6,452.16
Returned to General Treasury Fund.....		47.84
		<u> </u>
		\$ 6,500.00

PAVING GORHAM AND OTHER STREETS

Appropriation	\$ 75,013.50	
	<u> </u>	\$ 75,013.50

Expended

For Labor:		
To Sundry Persons.....	\$ 22,659.32	
	<u> </u>	22,659.32
For Sundries:		
App. Engineering.....	\$ 984.85	
App. Sewer Main, O. E.....	493.25	
App. Streets, O. E.....	12,995.53	
App. Streets, Wages.....	499.50	
App. Watering Streets, Wages.....	1,103.63	
App. Watering Streets, O. E.....	1,156.19	
Bartlett & Dow.....	4.50	
Boston & Maine R. R.....	1,479.85	
Commonwealth Trap Rock Co.....	277.64	
Geo. R. Dana.....	2.60	
L. A. Derby & Co.....	3.50	
H. C. Girard Co.....	2.20	

For Sundries:—Continued

Greendale Gas Engine Co.....	8.50	
Harry L. Harding.....	18.40	
T. Larkin.....	120.00	
Lowell Automobile Co.....	2.15	
Lowell Paving Repairing Co.....	793.99	
W. A. Mack Co.....	4.39	
F. A. Malorey.....	16,769.45	
Middlesex Machine Co.....	7.24	
John Marinel.....	324.53	
Seannell Boiler Works.....	9.24	
E. A. & A. T. Smith.....	1,215.28	
Snow & Horsfall.....	710.61	
Staples Bros.....	435.31	
Sunday Telegram.....	2.55	
D. T. Sullivan.....	4,696.14	
Upton & Gilman.....	5.50	
	<hr/>	44,127.52
		<hr/>
		66,785.84
Balance to 1912.....		8,227.66
		<hr/>

\$ 75,013.50

MACADAMIZING STREETS

Appropriation	\$ 35,000.00	
	<hr/>	\$ 35,000.00
		<hr/>

Expended

For Labor:

To Sundry Persons.....	\$ 7,969.45	
	<hr/>	7,969.45

For Sundries:

App. Engineering.....	\$ 126.19	
App. New Sidewalks.....	1,931.83	
App. Streets, O. E.....	14,079.40	
App. Streets, Wages.....	421.88	
American Asphaltum & R. Co.....	1,773.61	
Barber Asphalt Paving Co.....	537.17	
Boston & Maine R. R.....	855.60	
Commonwealth Trap Rock Co.....	55.09	
Courier-Citizen Co.	37.80	
Gulf Refining Co.....	400.94	
L'Etoile Publishing Co.....	22.50	
Lowell Sun	38.70	
Mass. Broken Stone Co.....	250.11	
Middlesex Machine Co.....	5.96	
E. A. & A. T. Smith.....	132.00	
Sunday Telegram	3.30	
Winchester Rock & Brick Co.....	766.78	
	<hr/>	21,438.86
		<hr/>
		5,591.69

Balance to 1912.....

\$ 35,000.00

BRIDGE REPAIRS

Appropriation	\$ 17,019.38	
	<u> </u>	\$ 17,019.38

Expended

For Labor:

To Sundry Persons.....	\$ 6,813.34	
	<u> </u>	6,813.34

For Sundries:

App. Engineering	\$ 460.95	
App. Streets	3,305.37	
App. Water Works.....	5.95	
Boston & Maine R. R.....	3.51	
Bartlett & Dow.....	5.25	
Burnham & Davis.....	760.74	
W. W. Carey Co.....	4.40	
C. B. Coburn Co.....	412.20	
Courier-Citizen Co.	5.40	
Geo. E. Hutchins.....	2.00	
Lowell Boiler Works.....	26.00	
Middlesex Machine Co.....	47.01	
Rice & Co.....	.50	
Jas. P. Robinson.....	35.98	
E. A. & A. T. Smith.....	984.70	
Thompson Hardware Co.....	2.71	
W. H. Ward.....	186.00	
E. A. Wilson & Co.....	78.90	
D. Ziskind & Co.....	5.85	
	<u> </u>	6,333.42

Balance to 1912.....

13,146.76
<u>3,872.62</u>

\$ 17,019.38

STROMQUIST AVENUE

Appropriation	\$ 3,750.00	
	<u> </u>	\$ 3,750.00

Expended

For Labor:

To Sundry Persons.....	\$ 198.89	
	<u> </u>	\$ 198.89

For Land:

Charles O'Neil	\$ 177.90	
Mary J. O'Neil.....	275.50	
Mary C. O'Neil.....	248.22	
Peter O'Neil	200.00	
	<u> </u>	901.62

Balance to 1912.....

1,100.51
<u>2,649.49</u>

\$ 3,750.00

PAVING EAST MERRIMACK STREET

Appropriation	\$ 2,700.00	
	<u> </u>	\$ 2,700.00
Balance to 1912.....	\$ 2,700.00	
	<u> </u>	\$ 2,700.00

5. CHARITIES

Charity Department, O. D. R.; Charity, Hospital;
Charity—City Hospital Repairs.

CHARITY DEPARTMENT**Out Door Relief**

Appropriation	\$ 42,652.43	
	<u> </u>	\$ 42,652.43

Expended

For Salaries:

Martin F. Conley, Supt.....	\$ 2,000.00	
	<u> </u>	2,000.00

For Clerk Hire and Wages:

To Sundry Persons.....	\$ 5,033.14	
	<u> </u>	5,033.14

To Cash Allowances:

To Sundry Persons.....	\$ 2,103.53	
	<u> </u>	2,103.53

For Office Supplies and Transportation:

Bay State St. Ry. Co.....	\$ 5.00	
Boston & Northern St. Ry.....	30.00	
Butterfield Printing Co.....	150.00	
Martin F. Conley.....	87.60	
Dumas & Co.....	2.75	
Hobbs & Warren Co.....	3.00	
Lawler Printing Co.....	9.75	
C. K. Miller.....	48.99	
T. F. McCarthy.....	30.25	
New Eng. Tel. & Tel. Co.....	.89	
G. C. Prince & Son.....	33.43	
R. C. Paradis.....	113.50	
J. H. Sparks.....	4.00	
F. A. M. Tobin's Printery.....	18.90	
	<u> </u>	538.06

For Physicians:

D. S. Bellehumeur.....	\$ 200.00
Alexis E. Bertrand.....	183.33
P. Brunelle	16.67
A. E. Gillard.....	221.28
T. J. Halloran.....	200.00
C. J. Halpin.....	229.68
C. A. Hamblet.....	6.00
J. E. Leary.....	200.00
P. J. Meehan.....	4.00
A. E. Shaw.....	50.00

 1,310.96

For Dispensary Supplies:

F. & E. Bailey & Co.....	\$ 40.20
F. M. Bill & Co.....	27.00
Boston & Maine R. R.....	.50
James J. Brown.....	8.80
F. J. Campbell.....	30.75
Carter & Sherburne.....	45.38
Clinton Mfg. Co.....	52.50
C. B. Coburn Co.....	14.19
Coffey Bros.	22.61
P. Dempsey & Co.....	511.10
Dumas & Co.....	9.75
Falls & Burkinshaw.....	20.65
Frank C. Goodale.....	43.95
J. A. B. Johnson.....	247.99
Mary D. Lang.....	15.00
R. J. Lang & Co.....	46.40
Lawler Printing Co.....	8.50
F. O. Lewis.....	69.10
Library Bureau	45.00
Lowell Pharmacy	15.00
Manchester & Concord Express Co.....	.75
Edward T. McEvoy.....	23.75
Frank E. McNabb.....	11.75
E. A. McQuade.....	163.40
J. H. O'Neil.....	289.02
Wm. H. Noonan.....	82.88
Denis O'Brien	170.60
E. E. Smith Co.....	4.25
Simpson & Rowland.....	40.18
John T. Sparks & Co.....	12.80
H. E. Webster.....	44.40
Geo. A. Wilson & Co.....	135.72

 2,253.87

Commonwealth:

Commonwealth of Massachusetts.....	\$ 340.01
Simpson & Rowland.....	17.05
G. A. Willson & Co.....	20.40

 377.46

For Interments:

Joseph Albert	\$ 46.00
Amadee Archambault	17.00

For Interments:—Continued

N. Bilodeau	18.00
J. A. Finnegan & Co.....	21.00
Geo. M. Eastman & Co.....	8.00
Geo. W. Healey.....	9.00
Higgins Bros.	2.00
John J. O'Connell.....	8.00
James H. McDermott.....	14.00
Thomas J. McDermott.....	11.00
J. F. O'Donnell & Sons.....	23.00
John L. McDonough.....	14.00
James W. McKenna.....	15.00
Charles H. Molloy.....	41.00
J. F. Rogers.....	5.00
Wm. H. Saunders.....	7.00
Peter H. Savage.....	11.00
John A. Weinbeck.....	7.00

 277.00

For Support of Almshouses:

Cities and Towns:

City of Beverly	\$ 22.90
Boston	972.16
Brockton	4.18
Cambridge	4.19
Chicopee	10.25
Everett	101.15
Fall River	139.07
Fitchburg	96.14
Haverhill	176.71
Holyoke	106.00
Lawrence	572.41
Lynn	13.94
New Bedford	237.10
Newburyport	61.09
Newton	63.48
Quincy	33.00
Salem	207.23
Springfield	20.23
Woburn	9.98
Worcester	90.88

 2,942.09

Towns of Chelmsford	\$ 68.81
Dudley	110.00
Holliston	20.28
North Andover	373.81
Peabody	5.18
Pepperell	65.47
Revere	1.00
Southbridge	3.65
Warren	89.63
Weymouth	109.90

 847.73

For Hospitals and Institutions:

French American Orphanage.....	\$	680.80
Hospital Cottages for Children.....		338.90
House of Angel Guardian.....		534.00
Lawrence Orphan Asylum.....		202.25
Lowell Hospital Association.....		182.93
Massachusetts Hospital School.....		625.71
New England Home for Little Wanderers		35.14
St. John's Hospital.....		3,286.00
St. Peter's Orphan Asylum.....		971.50
Salem Orphan Asylum.....		27.00

6,884.23

For Fuel—Wood Yard:

J. Brady	\$	335.55
Daniel Gage		146.78
Horne Coal Co.....		1,135.63
C. Loranger		16.88
C. L. Smith.....		65.49
S. J. Spence.....		66.00
Burton H. Wiggin Co.....		187.03

1,953.36

For Sundries—Wood Yard:

Bartlett & Dow.....	\$	32.60
Boston Engineers' Supply Co.....		11.50
C. B. Coburn Co.....		2.24
L. A. Derby & Co.....		27.68
Jos. Denes		1.50
Donovan Harness Co.....		17.00
H. C. Girard Co.....		6.05
Geo. E. Hutchins.....		3.50
Lowell Electric Light Corp.....		60.00
Lowell Gas Light Co.....		.60
P. A. Mackenzie.....		6.10
E. E. McCauslin.....		77.57
W. R. McKillop.....		15.25
Henry Reynolds		35.00
J. H. Sparks.....		1.10
Water Works App.....		10.80
Wilder & Wotton.....		90.55
J. T. Williamson.....		.25

399.29

For Ambulance—Sundries:

C. B. Coburn Co.....	\$	2.13
J. H. Donovan.....		300.00
Frye & Crawford Drug Co.....		2.00
F. B. Hill & Co.....		4.00
New Eng. Tel. & Tel. Co.....		5.60
A. G. Pollard & Co.....		18.97
G. C. Princee & Son.....		8.25
Salois & Leith.....		17.94
A. E. Shaw.....		250.00
E. E. Smith Co.....		.44
Sawayer Carriage Co.....		9.15
J. H. Sparks.....		2,512.30

3,130.78

For General—Sundries:

Adams Express Co.....	\$.60
American Express Co.....	.40
App. Hospital	7,645.00
App. Public Buildings.....	596.00
J. C. Bennett.....	1.00
Boston & Lowell Express Co.....	.60
City Clerk, Pawtucket, R. I.....	.50
C. B. Coburn Co.....	3.46
Daniel Gage	11.30
Mary D. Lang.....	15.00
W. A. Mack & Co.....	.90
Manchester & Concord Express Co.....	.50
New Eng. Tel. & Tel. Co.....	1.10
O'Sullivan Bros. Co.....	12.00
Roy & O'Heir.....	10.00
Sawyer Carriage Co.....	.15
Sampson & Murdock Co.....	9.00
Sunlight Shoe Store.....	6.50

8,314.01

Feeble Minded Bill:

Mass. School for Feeble Minded.....	\$ 4,286.92
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4,286.92

\$ 42,652.43
LOWELL CITY HOSPITAL AND ALMSHOUSE

Appropriation	\$ 62,890.56
	<hr/> \$ 62,890.56

Expended

For Wages:

To Sundry Persons.....	\$ 12,069.87
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For City Physician:

F. H. Smith.....	690.57
M. A. Tighe.....	9.43

12,769.87

For Grain, Groceries, Provisions. etc.:

Armour & Co.....	\$ 4,291.16
Barclay, Brown & Bird.....	12.95
Edward J. Barrett.....	280.79
F. S. Bean & Co.....	2,655.59
F. M. Bill & Co.....	2,575.51
W. Booth Co.....	118.70
Boston Fish Market.....	8.00
J. B. Bourdreaux.....	7.28
Boyle Bros.	2.40
G. J. & D. Bradt.....	26.00
Jas. H. Buckley Co.....	100.00
Wm. J. Burbeck.....	159.99
A. H. Burnham.....	64.25
Calderwood & Robbins.....	120.00

For Grain, Groceries, Provisions, etc.:—Continued

Calnan & Guthrie.....	28.92
Frank Carolin	2.40
J. B. V. Coburn.....	267.96
Coffey Bros.	40.02
C. P. Comerford.....	2,086.40
Daniel Cornell Co.....	56.00
J. B. Cover & Co.....	129.65
Humphrey Coffey	9.12
Cudahy Packing Co.....	21.25
J. P. Curley.....	338.68
S. K. Dexter.....	257.79
Dickson's Tea Store.....	90.00
M. J. Donoghue.....	7.50
D. J. Donovan.....	64.55
Duffey Bros.	380.00
T. R. Fahey.....	2,505.31
Farmers' Exchange	73.85
T. J. Fitzgerald.....	144.00
Fleischmann Co.	172.50
Walter E. Flaherty.....	22.50
James E. Freeman.....	105.86
C. F. Garland.....	43.80
D. Gerow	131.65
Harry Harris	18.00
Healey & Co.....	67.43
W. J. Hoare.....	169.54
Albert C. Hoyt.....	25.59
Independent Packing & Beef Co.....	218.37
A. L. Keefe.....	41.14
Loose-Wiles Biscuit Co.....	49.32
Lyons Calendar Mfg. Co.....	21.25
A. L. Macrae.....	839.90
D. W. Mackenzie.....	386.41
F. F. McCann & Co.....	15.00
J. J. McCann.....	64.00
T. A. McCann.....	80.16
E. E. McCauslin.....	1,190.62
John McCullough	106.08
D. P. McKenna.....	108.57
T. J. McDonald.....	14.10
Mansfield, Witham & Co.....	707.57
Wm. Henry Maule.....	9.70
Joseph Mullin	153.65
National Biscuit Co.....	92.27
O'Donnell Bros.	72.00
Outlet Fruit Co.....	101.62
J. J. Payne.....	55.58
Pawtucketville Cash Grocery.....	771.79
E. E. Philbrick.....	130.18
Geo. E. Putnam & Son.....	1,428.57
G. W. Randall.....	20.50
Fred M. Ranlett.....	8.00
Robertson Tobacco Co.....	80.00

For Grain, Groceries, Provisions, etc.:—Continued

J. F. Saunders.....	1,128.75
Samuel Scott	206.25
Simpson & Rowland.....	355.20
C. L. Smith.....	70.80
D. D. Smith.....	139.65
Suffolk Fish Market.....	8.00
J. J. Sullivan.....	154.07
T. A. D. Sullivan & Co.....	163.00
W. H. Sullivan.....	10.00
Swift & Bailey.....	3,075.19
Turner Centre Dairying Association.....	1.30
Vermont Mfg. Co.....	360.00
Charles E. Walsh.....	970.19
Wilder & Wotton.....	940.45

32,032.09

For Painters' and Electricians' Supplies:

Adams Hardware & Paint Co.....	\$ 54.11
Arthur J. Bernard.....	6.00
Owen E. Brennan.....	79.00
Canco's Mfg. Co.....	6.25
C. B. Coburn Co.....	231.04
New Eng. Elec. & Supply Corp.....	4.56
John A. Thomson & Co.....	19.00

399.96

For Water, Lighting and Telephone:

App. Water Works.....	\$ 1,782.26
Lowell Electric Light Corp.....	511.62
Lowell Gas Light Co.....	1,037.34
New Eng. Tel. & Tel. Co.....	45.47

3,376.69

For Hardware, Fittings, etc.:

Adams Hardware & Paint Co.....	\$ 30.00
F. G. Baldwin.....	2.31
H. R. Barker Mfg. Co.....	4.30
Bartlett & Dow.....	125.46
John C. Bennett.....	.66
Owen E. Brennan.....	94.77
Boutwell Bros.	1.76
Butts & Ordway Co.....	9.31
Carroll Bros. ....	.75
Edward Cawley	65.00
Cheney & Thomson Co.....	2.00
C. B. Coburn Co.....	36.58
Emery Cognac	2.10
Farrell & Conaton.....	19.38
H. C. Girard Co.....	30.62
C. F. Hoisington & Son.....	40.96
Geo. E. Hutchins.....	.10
John Kelley & Co.....	21.60
W. A. Mack Co.....	62.97
Middlesex County House of Correction..	17.50
Charles E. Munn.....	7.50
Richardson Mfg. Co.....	4.10

For Hardware, Fittings, etc.:—Continued

E. E. Smith.....	9.64
John A. Thompson & Co.....	15.82
Thompson Hardware Co.....	.20
J. S. Turner Mfg. Co.....	2.25
Welsh Bros.	2.75
Wear Proof Mat Co.....	31.87

 642.26
For Drugs, Medicines, etc.:

F. & E. Bailey & Co.....	\$ 24.46
C. B. Coburn Co.....	4.46
Columbian Insecticide Co.....	357.00
J. B. Cover & Co.....	7.00
Falls & Burkinshaw.....	14.00
Frye & Crawford.....	53.11
F. C. Goodale.....	21.00
Jaynes Drug Store.....	6.00
J. B. A. Johnson.....	31.25
R. J. Lang & Co.....	16.00
Fred O. Lewis.....	18.00
Denis O'Brien	47.23
H. A. Stoothoff Co.....	3.36
Talbot Dye & Chemical Co.....	160.68
Will & Baumer Co.....	19.80
George A. Wilson & Co.....	2.25

 785.60
For Clothing, etc.:

Bon Marche Dry Goods Co.....	\$ 1.35
J. L. Chalifoux Co.....	71.52
Cook, Taylor & Co.....	204.55
Emery Cognac	2.00
F. Cryan .....	.23
J. A. Desrosiers & Co.....	9.00
J. J. Doherty & Co.....	27.43
Gilbride Co.	561.92
M. F. Gookin Co.....	103.50
Geo. E. Hutchins.....	16.75
E. M. Kelley.....	81.00
T. F. McCann & Co.....	129.00
Mass. Reformatory	75.00
Mass. State Prison.....	1,483.50
Merrimack Clothing Co.....	154.10
Middlesex County House of Correction..	17.50
Geo. E. Mongeau.....	2.00
Nelson's Colonial Dept. Store.....	.65
O'Donnell Dry Goods Co.....	236.94
O'Sullivan Bros.	11.50
A. G. Pollard Co.....	113.98
Putnam & Son.....	127.00
Robertson Co.	222.20
Roy & O'Heir.....	27.50
Sampson Lock Co.....	6.32
Sunlight Shoe Store.....	12.45

For Clothing, etc.:—Continued

F. B. Sullivan.....	91.20
Talbot Clothing Co.....	144.00

3,934.09

For Express, Transportation, etc.:

Adams Express Co.....	\$.25
American Express Co.....	3.15
Boston & Lowell Express Co.....	.25
Boston & Maine R. R.....	9.24
Manchester & Concord Express Co.....	.95
New York, New Haven & H. R. R. Co....	1.63

15.47

For Carriages, Harnesses, and Repairs:

G. F. Allen.....	6.75
Arthur J. Bernard.....	1.00
Donovan Harness Co.....	100.43
F. B. Hill & Co.....	5.95
P. A. Mackenzie.....	10.40
F. A. Orcutt.....	90.00
Salois & Leith.....	46.30
J. H. Sparks.....	6.75

267.58

For Shoeing Horses:

M. J. Cahill.....	\$ 37.45
C. Desmond	11.00
J. J. Donnelly.....	83.25
A. J. Robillard.....	1.50
Henry Reynolds	63.75
J. H. Sparks.....	8.50

205.45

For Fuel, etc.:

J. B. Cover & Co.....	\$ 2.00
Jos. Mullin	66.50
D. T. Sullivan.....	400.01
E. A. Wilson & Co.....	3,979.73

4,448.24

For Stationery, Printing, etc.:

Baker Printing Co.....	\$ 5.00
Carter's Ink Co.....	1.50
E. Cryan	5.10
R. E. Judd.....	1.10
Library Bureau	9.00
G. C. Prince & Son.....	29.88
Charles S. Proctor.....	.65
F. A. M. Tobin's Printery.....	15.50

67.73

For Sundries:

App. Water Works.....	\$ 12.50
App. Charity, O. D. R.....	1,196.91
App. Health Yard.....	792.90
Bartlett & Dow.....	20.20
Boyle Bros.	1.80
Owen E. Brennan.....	2.85
W. J. Burbeck.....	5.50
Buffalo Specialty Co.....	4.50

For Sundries:—Continued

A. H. Burnham.....	43.00
Burnham & Davis Lumber Co.....	14.91
Cancos Mfg. Co.....	6.25
Emery Cognac	25.20
Chelmsford (Town of).....	72.75
C. B. Coburn Co.....	37.56
Collin's	10.75
Courier-Citizen Co.	3.00
Cross Awning Co.....	25.00
Chas. Daggett Box Co.....	30.00
Davis & Sargent Lumber Co.....	25.99
John J. Doherty & Co.....	172.78
Empire Laundry Machinery Co.....	9.25
J. Fay	12.42
S. Fegan .....	.50
Patrick Fitzgibbon	4.60
F. J. Flemings.....	10.83
Daniel Gage	313.25
David Gerow	67.65
Thomas F. Green.....	10.00
Frank Gallagher	50.00
Charles E. Gee.....	1.96
Gookin Furniture Co.....	22.00
Michael Grosse	5.00
A. J. Halpin.....	6.00
C. F. Hatch Co.....	4.95
L. H. Hauver.....	255.00
Geo. E. Hutchins.....	3.07
E. M. Kelley.....	90.00
J. F. Kelty.....	5.60
B. King	5.95
S. H. Knox & Co.....	3.00
Lull & Hartford.....	5.00
Wm. Henry Maule.....	35.70
P. H. McCarthy.....	106.00
J. A. & J. F. McDonald.....	10.00
Middlesex Leather Co.....	20.10
Morrison Metal Polish Co.....	12.00
Charles J. Mulholland.....	7.20
Charles E. Munn.....	15.00
Daniel Murphy	70.00
James Murkland & Son.....	1.25
Nelson's Colonial Store.....	16.50
A. E. O'Heir & Co.....	1.20
F. N. Park.....	30.00
Amasa Pratt Co.....	13.12
Pratt & Forrest.....	11.69
Robertson Co.	54.75
Sampson & Murdock Co.....	3.00
M. T. Senecal.....	2.00
Charles D. Slattery.....	25.00
E. E. Smith.....	6.57
M. Steinert & Sons Co.....	3.50

For Sundries:—Continued

D. T. Sullivan.....	35.20	
James A. Thompson.....	1.00	
Turner Centre D. Association.....	1.60	
Charles E. Walsh.....	5.75	
B. H. Wiggin Co.....	50.58	
Frank J. White.....	10.00	
E. A. Wilson & Co.....	4.50	
J. C. Wood.....	2.00	
	<hr/>	3,945.53
		<hr/>
		\$ 62,890.56
		<hr/>

CITY HOSPITAL REPAIRS

Appropriation	\$ 2,360.00	
	<hr/>	\$ 2,360.00
		<hr/>

Expended

For Wages:

To Sundry Persons.....	\$ 839.36
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For Sundries:

App. Public Buildings.....	14.20	
Bennett Bros. Co.....	174.27	
Burnham & Davis Lumber Co.....	47.22	
Courier-Citizen Co.	6.00	
J. L. Douglas & Co.....	14.77	
Wilfred Lorrain	40.70	
Lowell Sun	6.60	
J. F. MacMahon & Co.....	44.40	
Middleby Oven Mfg. Co.....	7.75	
A. Pratt Co.....	283.26	
Scott & O'Day Co.....	813.07	
Tucke & Parker Co.....	66.88	
	<hr/>	2,358.48

Balance returned to General Treasury Fund..

1.52

\$ 2,360.00

6. SOLDIERS' BENEFITS

State Aid Office
State Aid

Military Aid
Soldiers' Relief

STATE AID OFFICE

Appropriation	\$ 2,100.00		\$ 2,100.00
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Expended

For Salaries:

Geo. E. Worthen, Superintendent.....	\$ 1,200.00		
Mary F. O'Brien.....	800.00		
			2,00.00

For Office Supplies:

Lawler Printing Co.	\$ 2.00		
T. F. McCarthy.....	18.25		
C. K. Miller.....	20.25		
New Eng. Tel. & Tel. Co.....	.84		
Mary F. O'Brien.....	1.95		
G. C. Prince & Son.....	23.41		
Sampson & Murdock Co.....	3.00		
Arthur Smith .....	.50		
Smith Type. Insp'n Co.....	3.75		
Geo. E. Worthen.....	.50		
			74.45

2,074.45

Returned to General Treasury Fund.....

25.55

\$ 2,100.00

STATE AID

Expended

To Sundry Persons.....	\$ 16,903.00		16,903.00
Returned to General Treasury Fund.....			624.00
			\$ 17,527.00

MILITARY AID

Expended

To Sundry Persons.....	\$ 3,238.00		\$ 3,238.00

SOLDIERS' RELIEF

Appropriation	\$ 18,504.90		\$ 18,504.90
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Expended

To Sundry Persons.....	\$ 14,035.00	
		\$ 14,035.00

For Provisions, Fuel, etc.:

F. & E. Bailey & Co.....	\$ 12.10
Ella L. Blake.....	6.00
Patrick Boland	20.00
J. T. Brennan.....	42.00
J. S. Brooks.....	44.00
A. A. Brown.....	48.50
James J. Brown.....	2.65
J. H. Burke.....	40.00
Calnan & Guthrie.....	19.00
Carleton & Hovey.....	8.56
Edward Cawley	442.54
J. J. Colton.....	.50
Creamery Lunch	6.00
C. F. Devno.....	96.00
D. J. Donovan.....	15.00
J. H. Dunham.....	12.00
W. G. Eaton.....	3.00
Everett Market	16.00
Family Supply Co.....	192.00
Flynn's Market	12.00
Frank C. Goodale.....	8.68
W. T. Griffin.....	3.00
W. E. Hunt.....	6.00
John St. Public Market.....	84.86
A. B. J. Johnson.....	2.05
Wm. R. Keirnan.....	41.00
A. J. Keith.....	60.00
G. M. Kingsbury.....	72.00
R. Lang & Co.....	315.75
Frederick Leahey	4.00
Fred O. Lewis.....	29.60
Lowell Gas Light Co.....	35.70
Geo. Lynch	14.00
J. J. Maguire.....	48.00
Joseph C. McCarron.....	4.00
J. J. McCausland.....	66.00
Edward T. McEvoy.....	1.70
Arthur J. Molleur.....	4.00
Powell St. Cash Market.....	4.00
Marietta Robinson	4.00
Russell & Boynton.....	113.00
J. F. Saunders.....	67.00
M. E. Sheehy.....	8.00
L. T. Stevens.....	8.00
F. R. Strout.....	66.00
H. P. Timmons & Co.....	43.75
Union Market	84.00
S. W. Wiggin.....	25.00

 2,260.94

For Interments:

J. B. Currier & Co.....	\$ 35.00
Peter Davey	35.00
G. W. Healey.....	245.00
Higgins Bros.	35.00
Thomas J. McDermott.....	35.00
James W. McKenna.....	70.00
Charles H. Molloy.....	105.00
J. F. O'Donnell & Sons.....	140.00
Peter H. Savage.....	175.00
J. A. Weinbeck.....	35.00
Geo. E. Worthen.....	8.00
C. M. Young.....	280.00

1,198.00

For Physicians:

Solon Bartlett	\$ 26.00
J. F. Boyle.....	38.00
A. G. Dennett.....	8.00
W. G. Eaton.....	3.00
Guy Holbrook	1.00
S. A. Johnson.....	6.00
W. A. Johnson.....	78.00
R. L. Jones.....	1.00
Frederick Leahev	2.00
J. E. Leary.....	219.00
Joseph A. Meehan.....	24.00
P. J. Meehan.....	161.00
Daniel A. O'Hearn.....	16.00
W. H. Sherman.....	13.00

596.00

For Sundries:

App. Charity—O. D. R.....	\$ 74.60
App. Charity—Hospital	178.42
Boston & Maine R. R.....	7.74
Sanford M. Katell.....	4.00
Lowell Gas Light Co.....	4.76
Lowell Hospital Association.....	36.00
Patrick McNulty	16.45
C. K. Miller.....	29.94
J. H. Sparks.....	1.50
Western Union Tel. Co.....	1.55
Geo. E. Worthen.....	60.00

414.96

\$ 18,504.90

7. EDUCATION

Schools	Library
School Houses	Textile School
School House Repairs	

SCHOOL DEPARTMENT

Appropriation	\$401,969.74	
		<u>\$401,969.74</u>

Expended**For Salaries and Wages:**

A. K. Whitcomb, Superintendent.....	\$ 3,000.00	
Drawing School Teachers.....	2,476.00	
Evening School Teachers.....	11,977.25	
Grammar School Teachers.....	111,481.35	
High School Teachers.....	42,595.88	
Kindergarten School Teachers.....	12,301.13	
Primary School Teachers.....	87,164.75	
Day Janitors	48,087.56	
Evening Janitors	2,626.00	
Industrial School Teachers (Day).....	3,517.91	
Industrial School Teachers (Evening)...	897.50	
Industrial School Janitors.....	236.50	
School Physicians and Visitor.....	2,437.00	
Special Teachers, Truant Officers & Clerks	10,438.61	
		<u>\$339,237.44</u>

For Books:

Allyn & Bacon.....	\$ 45.40
American Book Co.....	595.13
D. Appleton & Co.....	13.44
Army & Navy Journal.....	13.10
Atkinson, Mentzer & Grover.....	1.67
Edw. E. Babb & Co.....	2,507.48
Boston Chamber of Commerce.....	1.66
Ginn & Co.....	1,375.06
Gregg Publishing Co.....	75.07
D. C. Heath & Co.....	339.77
Hinds, Noble & Eldredge.....	2.00
Henry Holt & Co.....	26.83
Houghton, Mifflin & Co.....	143.79
Kenny Bros. & Wolkins.....	4.25
C. E. Lauriat Co.....	8.50
Little, Brown & Co.....	166.59
G. & C. Merriam Co.....	20.80
Charles E. Merrill Co.....	138.62
J. A. Moore.....	12.00
Prang Co.	29.52
Rand, McNally & Co.....	15.20

For Books:—Continued

B. H. Sanborn & Co.....	119.35
Schoenhof Book Co.....	284.89
Charles Scribner's Sons.....	1,112.96
Silver, Burdett & Co.....	33.00
James Walsh	39.90
Westfield State Normal School.....	1.00
Windsor Publishing Co.....	5.00

 7,132.18

For Stationery, Printing, etc.:

Amberg File Co.....	\$ 1.50
A. R. Andrews.....	2.00
Baker Printing Co.....	23.75
Buckland Printing Co.....	26.00
Butterfield Printing Co.....	424.00
W. H. Claffin Co.....	13.65
Courier-Citizen Co.	252.50
Davis Printing Co.....	14.00
Dumas & Co.....	314.10
R. E. Judd.....	2.50
Lawler Printing Co.....	8.00
Osmond Long	49.15
T. F. McCarthy.....	179.00
Munn & Co.....	7.00
G. C. Prince & Son.....	4,281.64
Charles S. Proctor.....	64.75
Proctor Paper Co.....	.15
Sampson & Murdock Co.....	9.00
F. A. M. Tobin's Printery.....	59.00
Union Printing Co.....	146.50
M. G. Wight & Co.....	19.75

 5,897.94

For Carriages, Harnesses and Repairs:

F. G. Baldwin.....	\$ 4.80
Donovan Harness Co.....	57.00
C. H. Hanson & Co.....	170.00
F. B. Hill Co.....	10.49
Sawyer Carriage Co.....	30.25
J. H. Sparks.....	10.05
Wm. Zimmer	2.10

 284.69

For Water and Lighting:

App. Water Works.....	\$ 1,550.88
Lowell Electric Light Corp.....	2,421.89
Lowell Gas Light Co.....	882.36

 4,855.13

For Fuel, etc.:

John Brady	\$ 180.40
J. T. Brennan.....	34.50
A. A. Brown.....	18.00
Edward Cawley	1,979.01
Feeney Bros.	13.00
W. T. Griffin.....	87.75
D. A. Hefler.....	29.75

For, Fuel, etc.:—Continued

Horne Coal Co.....	7.00	
A. D. Little, Inc.....	10.00	
Geo. Lynch	65.25	
Joseph Mullin	7.50	
John P. Quinn.....	21.75	
Fred H. Rourke.....	23.60	
J. R. Smith's Sons.....	120.50	
S. W. Wiggin.....	217.25	
E. A. Wilson & Co.....	13,992.80	
Workshop for Blind.....		
		<hr/>
		16,803.06

Board of Horse and Shoeing:

J. J. Donnelly.....	\$	40.05	
J. H. Sparks.....		644.90	
		<hr/>	
			684.95

For Electrical Supplies:

A. W. Davis.....	\$	10.68	
L. A. Derby & Co.....		110.93	
M. E. Hobson.....		41.50	
New Eng. Elec. & Supply Corp.....		38.90	
Quinn Bros.		3.95	
Tucke & Parker Co.....		146.70	
		<hr/>	
			352.66

For Laboratory Supplies:

F. & E. Bailey Co.....	\$	2.50	
Bausch & Lomb Optical Co.....		36.63	
L. E. Knott Apparatus Co.....		94.97	
Talbot Dye & Chem. Co.....		47.62	
		<hr/>	
			181.72

For Express, Transportation, etc.:

Adams Express Co.....	\$	19.25	
American Express Co.....		28.73	
A. L. Bacheller.....		2.30	
John E. Barr.....		30.49	
Bay State St. Ry. Co.....		100.00	
Boston & Lowell Express Co.....		6.05	
Boston & Maine R. R.....		10.59	
Boston & Northern St. Ry.....		200.00	
W. H. Dooley.....		8.55	
A. M. French.....		.60	
H. H. Harris.....		8.70	
F. B. Hill & Co.....		30.38	
C. W. Irish.....		3.74	
Manchester & Concord Express Co.....		11.45	
James L. Mellen.....		16.30	
C. K. Miller.....		20.25	
Charles W. Morey.....		8.48	
J. H. Sparks.....		13.50	
W. F. Thornton.....		18.14	
A. K. Whitecomb.....		86.25	
F. A. Wood.....		21.38	
		<hr/>	
			645.33

For Furniture, Repairs, Cloth, etc.:

Adams & Co.....	\$	16.88
A. Lamontagne & Co.....		12.48
Massachusetts Com. for Blind.....		8.55
R. T. Mower.....		6.00
O'Donnell Dry Goods Co.....		4.39
A. G. Pollard Co.....		2.69
Robertson & Co.....		64.10
James Stanley		13.00
John A. Thomson & Co.....		90.00
W. E. Webster.....		13.45
William Zimmer		12.80

244.34

For Music and Musical Supplies:

C. C. Birchard & Co.....	\$	6.45
Boston Music Co.....		4.62
Oliver Ditson & Co.....		20.40
I. A. Foote.....		153.00
Peter Gallagher		
Louis Grunwald, Jr.....		11.00
Hibbard's Orchestra		90.00
Kershaw & Son.....		76.50
Kimball System		8.50
Harriet Mansur		21.25
National Band		92.00
W. A. Owen.....		13.00
M. Steinert & Sons.....		4.50
Mary F. Wallace.....		21.00

522.22

For Paints, Oils, etc.:

Adams Hardware & Paint Co.....	\$	.50
F. G. Baldwin.....		18.60
Sylvester Bean		1.00
Owen E. Brennan.....		10.18
Canco's Mfg. Co.....		3.00
Clinton Mfg. Co.....		9.75
C. B. Coburn Co.....		100.55
Columbia Refining Co.....		30.60
H. C. Girard Co.....		3.47
W. E. King.....		60.00
D. P. McKenna.....		.12
Masury, Young & Co.....		19.50
E. E. Smith Co.....		16.43
J. A. Thomson & Co.....		9.40
Thompson Hardware Co.....		3.50

286.60

For Hardware, etc.:

Adams Hardware & Paint Co.....	\$	6.80
F. G. Baldwin.....		35.75
W. T. S. Bartlett.....		5.50
Bartlett & Dow.....		12.50
J. C. Bennett.....		7.87
F. W. Bird & Son.....		10.66
Boston Engineers Supply Co.....		45.00

For Hardware, etc.:—Continued

Boutwell Bros.	44.61
J. Breck & Sons.....	30.00
Owen E. Brennan.....	18.90
Carroll Bros. ....	.35
Chandler & Barber.....	6.75
Clark Machine Co.....	30.00
C. B. Coburn Co.....	287.57
Colonial Can Co.....	4.50
H. C. Girard Co.....	80.25
Hendy Machine Co.....	3.50
C. F. Hoisington & Son.....	60.40
W. A. Mack Co.....	81.41
Nelson's Colonial Department Store....	1.80
Pevey Foundry Co.....	1.14
E. E. Smith Co.....	72.03
Thompson Hardware Co.....	57.48
J. A. Thomson & Co.....	249.70
Charles E. Walsh.....	33.00
Wear Proof Mat Co.....	15.30

 1,202.77

For Sundries:

App. School Houses.....	\$ 8,226.66
Adams Hardware & Paint Co.....	7.00
Armour & Co.....	20.50
Atkinson, Mentzer & Grover.....	38.40
F. G. Baldwin.....	218.52
H. R. Barker Mfg. Co.....	.40
John E. Barr.....	8.87
Bartlett & Dow.....	6.00
B. R. Benner, M. D.....	5.00
E. J. Bill.....	9.50
F. M. Bill & Co.....	39.00
Herbert D. Bixby.....	19.78
Bon Marche Dry Goods Co.....	11.96
Boston Engineers Supply Co.....	75.00
A. M. Boydston.....	6.25
Milton Bradley Co.....	6.75
Burnham & Davis Lumber Co.....	38.18
Caneos Mfg. Co.....	3.60
Carroll Bros.	4.20
Clinton Mfg. Co.....	29.97
J. J. Cluin.....	87.00
C. B. Coburn Co.....	70.64
Cook, Taylor & Co.....	67.00
Patrick Connolly	1.37
O. E. Coon.....	25.00
S. H. Couch Co.....	9.00
Courier-Citizen Co.	9.75
Martin B. Crowe.....	1.37
Dennison Mfg. Co.....	3.13
Dickerman & McQuade.....	6.34
Doherty Bros.	2.57
T. H. Elliott.....	12.50

For Sundries:—Continued

W. H. P. Faunce.....	75.00
A. T. Fay.....	1.05
Farrell & Conaton.....	1.05
F. J. Flemings.....	6.00
Edward F. Foye.....	8.90
Charles E. Galley.....	18.00
Gilbride Co.	416.04
F. C. Goodale.....	3.35
W. M. Graves.....	350.00
James J. Gray.....	25.00
Louis Grunewald, Jr.....	5.00
Geo. F. Haggerty.....	20.00
Thomas Hannigan	5.00
U. & R. Harding Co.....	11.00
H. E. Harris.....	4.50
E. F. Hathaway.....	.50
M. E. Hobson.....	56.00
Howard Duster Co.....	46.50
Geo. E. Hutchins.....	8.62
John St. Public Market.....	11.00
Wm. J. Kenney.....	1.37
Kenney Bros. & Wolkins.....	81.75
Klean Off Dust Mfg. Co.....	12.50
Homer P. Lewis.....	51.65
W. A. Liddle.....	30.00
Arthur D. Little, Inc.....	25.00
A. R. Lopez & Bro.....	18.75
Lowell Gas Light Co.....	6.33
Lowell Sun	6.30
Lull & Hartford.....	36.35
A. D. Mack Co.....	72.25
McKinley Publishing Co.....	2.30
J. F. McMahon & Co.....	23.04
McNabb Bros.	189.32
Mass. Com. for Blind.....	14.20
Middlesex County Training School.....	4,025.13
Morse & Beals.....	10.00
R. T. Mower.....	6.00
New Eng. Publishing Co.....	3.50
New Eng. Tel. & Tel. Co.....	69.63
No Dust Mfg. Co.....	3.75
O'Donnell Dry Goods Co.....	35.00
D. Perrault & Co.....	7.03
A. G. Pollard Co.....	202.08
Amasa Pratt Co.....	65.46
Putnam & Son.....	1.15
A. L. Ready & Son.....	5.00
Ring Piano Co.....	4.50
Scott & O'Day.....	71.92
James Shanley	60.33
E. E. Smith Co.....	27.00
Smith Premier Typewriter Co.....	1.90
J. H. Sparks.....	9.45

For Sundries:—Continued

James Stanley	34.20
Steward Mfg. Co.....	1.10
Stickney & Austin.....	25.00
J. J. Sullivan.....	1.10
H. F. Thomas Co.....	10.00
J. A. Thomson & Co.....	116.50
Charles E. Walsh.....	80.75
Ralph A. Ward.....	100.00
F. P. Welch.....	.25
W. E. Westall.....	127.79
A. K. Whitcomb.....	5.52
Henry F. Whiting.....	13.03
E. A. Wilson & Co.....	2.25
Michael H. Winn.....	1.37
Workshop for Blind.....	10.60
Wm. Zimmer	24.00

15,877.12

INDUSTRIAL SCHOOL

For Books:

Edw. E. Babb & Co.....	\$ 9.00
D. C. Heath & Co.....	25.00

34.00

For Stationery, Printing, etc.:

Baker Printing Co.....	\$ 4.50
Courier-Citizen Co.	29.00
E. Cryan .....	.50
Educational Press Co.....	8.00
T. F. McCarthy.....	1.00
G. C. Prince & Son.....	129.99

172.99

For Hardware, Machinery, etc:

Atlantic Belting & Machine Co.....	\$ 3.75
F. G. Baldwin.....	85.45
H. R. Barker Mfg. Co.....	125.00
Bartlett & Dow.....	28.68
Boutwell Bros.	12.78
Owen E. Brennan.....	325.70
W. W. Carey Co.....	272.00
Carpenter Tap & Die Co.....	67.68
Doherty Bros.	95.00
George Fifield	768.54
Samuel Fleming	40.00
H. C. Girard Co.....	237.89
W. F. Haverly.....	1.00
C. F. Hoisington & Son.....	3.65
Lowell Machine Co.....	26.50
Lowell Machine Shop.....	56.09
W. A. Mack Co.....	31.57
Prentiss Tool Co.....	180.00
E. E. Smith Co.....	10.00
Thompson Hardware Co.....	123.11
J. A. Thomson & Co.....	517.90

3,012.29

For Sundries:

Adams Express Co.....	\$ 17.61
Adams Hardware & Paint Co.....	8.73
Bon Marche Dry Goods Co.....	71.44
Boston & Maine R. R.....	2.52
Burnham & Davis Lumber Co.....	103.61
Buxton & Son Co.....	7.89
Cambridge Bot. Supply Co.....	1.50
Central Scientific Co.....	6.00
C. B. Coburn Co.....	34.38
Coffey Bros.	28.95
Davis & Sargent Lumber Co.....	42.68
L. A. Derby Co.....	35.68
W. H. Dooley.....	9.25
Wm. Gaertner & Co.....	5.00
Gilbride Co.	16.44
M. F. Gookin Co.....	29.00
C. O. A. Grover.....	7.50
Hartford Life Insurance Co.....	15.00
F. B. Hill Co.....	15.13
Hill Transfer Co.....	101.64
Geo. E. Hutchins.....	4.00
J. A. B. Johnson.....	2.05
A. E. Johnston.....	53.79
A. L. Keefe.....	85.52
John Kelly & Co.	10.37
Kitson Machine Co.....	125.00
Knott Apparatus Co.....	4.95
A. Lamontagne & Co.....	20.00
Lowell Gas Light Co.....	355.86
Lull & Hartford.....	.38
Geo. Lynch ....	.80
Manchester & Concord Express Co.....	1.05
McNabb Bros.	9.56
C. E. Moss.....	69.60
Jos. Mullin	5.00
New Eng. Electric & Supply Corp.....	162.27
New Eng. Motor Co.....	65.59
O'Donnell-Gilbride Co.	4.52
Pettingell-Andrews Co.	35.74
A. G. Pollard Co.....	92.65
Amasa Pratt Co.....	287.63
Robertson Co.	39.60
E. E. Smith Co.....	7.25
Stanley Coal & Transportation Co.....	17.75
D. T. Sullivan.....	7.00
Welch Bros.	11.90
W. E. Westall.....	130.77
H. F. Whiting.....	183.74
Young Men's Christian Association.....	25.50

 2,379.79

EVENING SCHOOLS

For Water, Lighting, Fuel, etc.:

App. Water Works.....	\$ 2.70
Edward Cawley	77.09
Lowell Electric Light Corp.....	403.76
Lowell Gas Light Co.....	362.85
E. A. Wilson & Co.....	316.11

 1,162.51

For Sundries:

American Book Co.....	\$ 17.28
App. Water Works.....	21.00
Baker Printing Co.....	24.25
Edw. E. Babb & Co.....	48.76
Buckland Printing Co.....	39.00
Carroll Bros.	4.50
Claffin & Co.....	2.00
C. B. Coburn Co.....	11.70
Courier-Citizen Co.	13.50
A. M. Drury.....	1.25
Dumas & Co.....	11.50
Joseph J. Flynn.....	3.00
H. C. Girard Co.....	6.20
Gregg Co.	77.00
D. C. Heath Co.....	70.67
Hibbard's Orchestra	31.50
Houghton, Mifflin & Co.....	20.25
T. F. McCarthy.....	28.75
New Eng. Electric & Supply Corp.....	169.75
O'Donnell Dry Goods Co.....	2.25
A. G. Pollard Co.....	9.50
Charles R. Preston.....	3.75
G. C. Prince & Son.....	243.03
Lilla E. Roche.....	19.00
Thomas G. Robbins.....	11.35
Silver, Burdett & Co.....	76.67
J. A. Stephens.....	3.08
J. A. Thomson Co.....	15.00
F. A. M. Tobin's Printery.....	3.00
Tucke & Parker Co.....	6.57

 995.01

 \$401,969.74
SCHOOL HOUSES**Wages**

Appropriation	\$ 13,005.76
	<hr/>
	\$ 13,005.76

Expended

To Sundry Persons.....	\$ 13,005.76
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	\$ 13,005.76

Other Expenses

Appropriation	\$ 16,845.47	
	<hr/>	\$ 16,845.47

Expended**For Mason Work, Roofing, Plastering, etc.:**

E. Bibeault	\$ 253.62
B. F. Crosby & Co.....	392.32
J. L. Douglas & Co.....	98.80
Philip Ginty	421.89
Jas. L. Gordon.....	115.90
J. Jalbert	4.08
Wilfred Lorrain	132.75
W. A. Mack & Co.....	514.98
Samuel E. Snow.....	55.43
Daniel T. Sullivan.....	187.23
W. E. Westall.....	3.50

2,180.50
For Paints, Oils, etc.:

F. G. Baldwin.....	\$ 82.00
O. E. Brennan.....	108.59
C. B. Coburn Co.....	503.77
Early Paint Co.....	153.50
E. A. McQuade & Co.....	13.89
E. E. Smith Co.....	34.89
John A. Thomson & Co.....	470.75

1,367.39
For Plumbing, Pipe, Fittings, etc.:

H. R. Barker Mfg. Co.....	\$ 267.62
Carroll Bros.	896.14
Challenge Tube Cleaner Co.....	1.20
John A. Cotter & Co.....	475.22
Desmarais & Bourret.....	474.90
Harry S. Drury.....	468.57
Farrell & Conaton.....	197.04
James L. Gordon.....	105.25
J. Harvey & Co.....	3.90
C. F. Hoisington & Son.....	76.22
John Kelley & Co.....	11.10
Lowell Furnace Co.....	366.83
W. A. Mack Co.....	353.07
Middlesex Machine Co.....	9.51
J. F. McMahon & Co.....	32.16
Hugh McLarney	57.98
Nichols Foundry Co.....	3.36
Pevey Foundry Co.....	.21
Regan & Kirwin.....	3.15
Seannell Boiler Works.....	625.86
Scott & O'Day Co.....	1,103.03
E. T. Shaw Co.....	1,125.24
J. W. Stewart.....	237.59
Welch Bros.	204.23
H. H. Wilder & Co.....	911.91

8,011.29

For Lumber:

E. Bibeault	\$	23.75	
Burnham & Davis Lumber Co.....		413.13	
Davis & Sargent Lumber Co.....		29.00	
Pratt & Forrest Co.....		30.21	
Amasa Pratt Co.....		547.02	
C. L. Smith.....		12.50	
William Wilby		7.90	
			<hr/>
			1,063.51

For Hardware, etc.:

Adams Hardware & Paint Co.....	\$	108.93	
American Seating Co.....		42.00	
F. G. Baldwin.....		199.34	
Bartlett & Dow.....		53.67	
W. T. S. Bartlett.....		.80	
John C. Bennett.....		21.50	
Boutwell Bros. ....		.05	
Owen E. Brennan.....		168.59	
Cheney & Thomson Co.....		104.00	
C. B. Coburn Co.....		66.92	
H. C. Girard Co.....		135.24	
James L. Gordon.....		98.00	
C. F. Hoisington & Son.....		28.97	
John Kelley & Co.....		3.75	
Rice & Co.....		2.56	
Scannell Boiler Works.....		60.42	
E. E. Smith Co.....		29.22	
Thompson Hardware Co.....		13.13	
John A. Thomson & Co.....		295.45	
Troy Bros. & Co.....		8.63	
			<hr/>
			1,441.17

For Electrical Supplies:

L. A. Derby & Co.....	\$	21.98	
Harry F. Harding.....		92.18	
Tucke & Parker Co.....		14.02	
			<hr/>
			128.18

For Sundries:

American Distilling Co.....	\$	72.96	
American Express Co.....		1.61	
American Seating Co.....		346.50	
App. Sewer Main.		160.32	
App. Water Works.....		43.53	
E. Bibeault		116.89	
P. Blanchard		2.20	
Boston & Lowell Express Co.....		.35	
Boston & Maine R. R.....		.51	
John Boucher		8.00	
Owen E. Brennan.....		33.57	
Cancos Mfg. Co.....		75.50	
Chamberlain Metal Strip Co.....		210.00	
C. B. Coburn Co.....		269.90	
Patrick Cogger		10.00	
Cross Awning Co.....		6.00	
Donovan Harness Co.....		9.00	

For Sundries:—Continued

John Farro	1.50	
Frye & Crawford Co.....	.75	
Gilbride Co.....	11.00	
J. B. Goodwin.....	5.25	
C. M. Holmes.....	3.00	
James Hickey	25.00	
J. Jalbert	110.93	
A. E. Johnson.....	467.39	
L. J. Lebarge.....	4.80	
Lowell Coach Co.....	25.00	
Lowell Wall Paper Co.....	22.23	
W. A. Mack Co.....	26.34	
D. P. McKenna.....	.50	
N. Y., N. H. & H. R. R.....	2.68	
A. G. Pollard Co.....	4.75	
Rice & Co.....	26.18	
E. A. & A. T. Smith.....	122.02	
John J. Sullivan.....	.40	
T. A. D. Sullivan.....	2.25	
Talbot Dye. & Chem. Co.....	.07	
Troy Bros. Co.....	13.13	
D. W. Walker.....	12.50	
James Walsh & Son.....	299.97	
Wm. Wilby	11.74	
E. A. Wilson & Co.....	73.08	
Henry F. Whiting.....	3.83	
Wm. Wrigley & Co.....	10.30	
	<hr/>	2,653.43
		<hr/>
		\$ 16,845.47
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LIBRARIES**Library and Reading Room****LIBRARY**

Appropriation	\$ 15,500.00	
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Expended

To Trustees of City Library.....	\$ 15,500.00	
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LOWELL TEXTILE SCHOOL

Appropriation	\$ 8,000.00	
	<hr/>	\$ 8,000.00
		<hr/>

Expended

Trustees Lowell Textile School.....	\$ 8,000.00	
	<hr/>	\$ 8,000.00
		<hr/>

SCHOOL HOUSE REPAIRS

Appropriation	\$ 7,747.86	
	<u> </u>	\$ 7,747.86

Expended**For Wages:**

To Sundry Persons.....	\$ 2,144.37	
	<u> </u>	\$ 2,144.37

For Mason Work, Roofing, Plastering, etc.:

E. Bibeault	\$ 690.64	
Matthias F. Connors.....	465.00	
B. F. Crosby & Co.....	231.00	
J. Jalbert	109.77	
Lowell Wall Paper Co.....	299.00	
Frank E. Riley.....	475.80	
Samuel E. Snow.....	158.02	
E. A. Wilson & Co.....	2.90	
	<u> </u>	2,432.13

For Plumbing, Pipe, Fittings, etc.:

H. R. Barker Mfg. Co.....	\$ 85.97	
John A. Cotter & Co.....	117.63	
Demarais & Bourret.....	148.35	
W. A. Mack & Co.....	212.86	
J. F. McMahon & Co.....	164.39	
Scott & O'Day Co.....	585.83	
	<u> </u>	1,315.03

For Hardware, etc.:

C. F. Hoisington & Son.....	\$ 119.50	
Arthur P. Knapp.....	719.30	
Seannell Boiler Works.....	553.43	
	<u> </u>	1,392.23

For Sundries:

App. Water Works.....	\$ 45.98	
F. G. Baldwin.....	159.10	
Bentley & Edwards Mfg. Co.....	2.50	
Courier-Citizen Co.	5.70	
Donovan Harness Co.....	4.50	
Charles Hamel	8.35	
L'Etoile	3.30	
Lowell Sun	6.75	
E. A. & A. T. Smith.....	109.80	
D. T. Sullivan.....	23.39	
James Walsh	86.33	
	<u> </u>	464.10
		<u> </u>
		\$ 7,747.86

8. RECREATION

Parks	Shedd Playground
Playgrounds	Repairing School Grounds
Lucy Larcom Park	Baltimore March Anniversary
Memorial Day, G. A. R.	Labor Day
Memorial Day, S. W. V.	Little Canada Playground (Water
Band Concerts	Piping)
July Fourth	Columbus Day Observance

PARK DEPARTMENT

Salaries and Wages

Appropriation	\$ 10,015.33	
		\$ 10,015.33

Expended

To Sundry Persons.....	\$ 10,015.33	
		\$ 10,015.33

Other Expenses

Appropriation	\$ 4,399.82	
		\$ 4,399.82

Expended

For Shoeing Horses, Carriages, Harnesses, etc.:		
E. P. Bryant.....	\$ 44.13	
J. J. Donnelly.....	119.35	
Donovan Harness Co.....	77.07	
C. H. Hanson & Co.....	7.00	
B. F. Lewis.....	11.00	
Geo. R. Morse.....	2.00	
		260.55
For Hay, Grain, etc.:		
J. A. Boucher.....	\$ 63.75	
J. B. Cover & Co.....	10.70	
Geo. M. Foster.....	57.40	
E. E. McCauslin.....	265.89	
T. J. McDonald.....	63.90	
Joseph Mullin	123.14	
Paul Vigeant & Co.....	50.14	
Wilder & Wotton.....	441.59	
		1,076.51

For Plants, Shrubs, Loam, etc.:

Bay State Nurseries.....	\$	169.75
J. B. Cover Co.....		40.74
F. L. Emerson.....		12.94
Framingham Nurseries		20.00
Fred Jenness		120.83
Lowell Co-operative Association.....		67.36
Robin Hill Nurseries.....		158.53
Whittet & Co.....		381.03

 971.18

For Hardware, etc.:

Ashton Valve Co.....	\$	9.00
H. R. Barker Mfg. Co.....		28.42
Bartlett & Dow.....		115.08
C. B. Coburn Co.....		13.29
Enterprise Foundry & Fence Co.....		60.00
H. C. Girard Co.....		49.50
Pevey Foundry Co.....		12.27
C. N. Rice.....		.25
Rice & Co.....		40.70
Thompson Hardware Co.....		2.85
John A. Thomson & Co.....		39.40
Charles E. Walsh.....		6.00
Water Works App.....		11.96
James Whittet		8.43
J. T. Williamson.....		1.25

 398.40

For Stationery, Printing, etc.:

American City Publishing Co.....	\$	1.00
Dumas & Co.....		22.15
Charles E. Galley.....		2.45
R. J. Haight.....		2.00
C. I. Hood Co.....		163.80
H. C. Kittredge.....		1.25
G. C. Prince & Son.....		130.50
Suburban Life		3.00
Union Printing Co.....		18.25

 344.40

For Express, Transportation, etc.:

American Express Co.....	\$	1.38
Boston & Maine R. R.....		.60
Burnham & Davis Lumber Co.....		13.20
New York, New Haven & Hartford R. R.		12.27
J. H. Sparks.....		1.00
Charles A. Whittet.....		2.60

 31.05

For Water and Lighting:

App. Water Works.....	\$	1.77
Lowell Electric Light Corp.....		25.71

 27.48

For Sundries:

App. Engineering	\$ 30.28	
App. Public Buildings.....	16.38	
App. Water Works.....	41.75	
Boston Regalia Co.....	59.00	
John Brady	155.00	
W. P. Brazer & Co.....	42.63	
J. A. Brien.....	13.52	
Burnham & Davis Lumber Co.....	6.00	
Edward Cawley	33.93	
Church St. Auto Corp.....	10.00	
C. B. Coburn Co.....	33.45	
Davis & Sargent Lumber Co.....	2.60	
Charles E. Gee.....	27.65	
C. H. Hanson & Co., Inc.....	110.20	
E. T. Hathaway.....	6.00	
Charles E. Howe & Co.....	5.00	
Middlesex Auto Co.....	8.50	
Middlesex Registry of Deeds.....	1.55	
New Eng. Tel. & Tel. Co.....	50.64	
Norcross & Leighton.....	100.80	
O'Donnell Dry Goods Co.....	.25	
Olmstead Bros.	106.47	
Pratt & Forrest.....	10.09	
Amasa Pratt Co.....	36.38	
Fred M. Prescott.....	5.00	
Prop. Locks & Canals.....	15.00	
C. N. Rice.....	.75	
Robertson Co. ....	.75	
Sampson & Murdock Co.....	3.00	
E. A. & A. T. Smith.....	241.48	
E. E. Smith.....	3.23	
J. H. Sparks.....	4.00	
Suffolk Eng. & Elec. Co.....	54.60	
D. T. Sullivan.....	48.25	
Talbot Dye. & Chem. Co.....	2.15	
Tucke & Parker Co.....	1.66	
Wm. E. Westall.....	.50	
James Whittet .....	.81	
		1.290.25
		<u>\$ 4.399.82</u>

PLAYGROUNDS

Appropriation	\$ 2,304.23	
		<u>\$ 2,304.23</u>

Expended

For Labor:		
To Sundry Persons.....	\$ 1,998.37	
		<u>\$ 1,998.37</u>

For Sundries:

Adams Express Co.	\$	1.31	
App. Engineering		2.56	
H. R. Barker Mfg. Co. ....		.13	
Bartlett & Dow		10.96	
S. Bean		6.78	
Beggs & Cobb Tanning Co.		32.50	
Bentley & Edwards Mfg. Co.		1.50	
Boston & Maine R. R.		23.40	
Boutwell Bros.		12.37	
W. P. Brazer Co.		126.68	
Edward Cawley		3.27	
C. B. Coburn Co.		2.71	
Everwear Mfg. Co.		16.80	
H. C. Girard Co. ....		.25	
Geo. M. Foster .....		.80	
H. F. Hathaway		1.50	
Narragansett Machine Co.		1.50	
P. O'Hearn		5.20	
Pratt & Forrest		1.02	
Amasa Pratt Co.		1.34	
C. N. Rice		2.15	
Robertson Co.		3.50	
Thompson Hardware Co. ....		.69	
Union Printing Co.		1.50	
Charles A. Whittet		1.00	
James Whittet		42.36	
E. A. Wilson & Co.		2.08	
			<hr/>
			305.86
			<hr/>
	\$		2,304.23
			<hr/>

LUCY LARCOM PARK

Appropriation	\$	1,000.00	
		<hr/>	\$ 1,000.00
			<hr/>

For Labor:

Expended

To Sundry Persons	\$	301.60	
		<hr/>	\$ 301.60

For Sundries:

App. Engineering	\$	8.04	
H. R. Barker Mfg. Co.		3.70	
Bay State Nurseries		157.20	
Boston & Maine R. R.		1.50	
Electric Railway Equipment Co.		92.50	
Lowell Electric Light Corp.		169.61	
Morse & Beals		6.50	
New York, New Haven & Hartford R. R.		13.42	
Thompson Hardware Co.		12.09	
Chas. A. Whittet		3.00	
A. Whittet		16.73	
		<hr/>	484.29
			<hr/>
			785.89

Returned to General Treasury Fund.....	214.11
	<u>\$ 1,000.00</u>

MEMORIAL DAY G. A. R.

Appropriation	\$ 1,000.20	
	<u> </u>	\$ 1,000.20

Expended

For Printing and Music:

American Band	\$ 100.00	
Mrs. S. G. Brown.....	5.00	
Lowell Military Band.....	106.00	
T. F. McCarthy.....	25.50	
R. McDaniels	3.00	
	<u> </u>	239.50

For Entertainment and Transportation:

Boston & Northern St. Ry. Co.....	\$ 7.00	
O. P. Davis.....	65.00	
J. A. Gregoire.....	4.00	
Post 42, G. A. R.....	34.31	
Post 120, G. A. R.....	34.31	
Post 185, G. A. R.....	34.31	
Henry Reynolds	4.00	
	<u> </u>	182.93

For Sundries:

F. W. Cragin.....	\$ 12.50	
First Congregational Church.....	25.00	
John Harrington, Post 42.....	4.00	
F. G. Little.....	9.00	
Lowell Cemetery	3.00	
Masten & Wells Fireworks Co.....	106.25	
Thomas McDonald	4.00	
Morse & Beals.....	178.20	
Daniel Murphy, Post 42.....	4.00	
Thomas O'Reagan	15.50	
F. B. Peabody.....	25.00	
Pevey Foundry Co.....	130.50	
Post 120, G. A. R.....	5.75	
Post 185, G. A. R.....	8.45	
Geo. H. Taylor.....	5.00	
Geo. E. Worthen, Post 42.....	6.62	
Charles F. Young.....	35.00	
	<u> </u>	577.77
		<u>\$ 1,000.20</u>

MEMORIAL DAY, SPANISH WAR VETERANS

Appropriation	\$ 350.00	
	<u> </u>	\$ 350.00

.Expended

For Printing and Music:

Buckland Printing Co.....	\$	4.75
C. F. Kittredge.....		2.04
Lowell Cadet Band.....		88.00
Mendelssohn Male Quartet.....		25.00

119.79

For Entertainment and Transportation:

City Transfer Co.....	\$	31.50
Henderson Bros.		125.00
Lowell Coach Co.....		15.00

171.50

For Sundries:

Bon Marche Co.....	\$	5.25
Frank Dodge		14.40
J. J. McManmon.....		32.00
Rent of Grafton Hall.....		7.00

58.65

Returned to General Treasury Fund.....

\$ 349.94

.06

\$ 350.00

BAND CONCERTS

Appropriation \$ 700.00

\$ 700.00

Expended

For Sundries:

American Band	\$	125.00
City Band		162.50
Lowell Cadet Band.....		125.00
Lowell Military Band.....		122.50
National Band		125.00
Robertson Co.		10.50
John F. Rogers.....		2.50
Tucke & Parker.....		4.43

677.43

Returned to General Treasury Fund.....

22.57

\$ 700.00

FOURTH OF JULY

Appropriation \$ 1,602.70

\$ 1,602.70

Expended

For Labor:

To Sundry Persons.....	\$	27.50
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\$ 27.50

For Fireworks:

National Fire Works.....	\$ 800.00	
		<u>800.00</u>

For Music and Bell Ringing:

American Band	\$ 100.00	
Cadet Band	100.00	
City Band	100.00	
J. J. Johnson.....	10.00	
Military Band	100.00	
National Band	100.00	
		<u>510.00</u>

For Sundries:

App. Public Buildings.....	\$ 98.70	
Jas. Carr	25.00	
John A. Crowley.....	5.00	
Michael Conoughton	5.00	
Dixwell Base Ball Club.....	50.00	
Val. Delorme	3.00	
Wm. Fadden	3.00	
John Flanagan	3.00	
Wm. F. Foye & Co.....	5.00	
John Lynch	10.00	
Lowell Coach Co.....	24.50	
John Nesson	3.00	
Charles Rourke	15.00	
Peter Reagan	5.00	
Arthur D. Williams.....	10.00	
		<u>265.20</u>
		<u>\$ 1,602.70</u>

SHEDD PARK

Appropriation	\$ 16,239.66	
		<u>\$ 16,239.66</u>

Expended

For Labor:

To Sundry Persons.....	\$ 9,306.01	
		<u>\$ 9,306.01</u>

For Sundries:

App. Engineering	\$ 1.06	
App. Sewers .....	.49	
App. Water Works.....	68.96	
Bartlett & Dow.....	8.95	
J. C. Bennett.....	6.50	
Boston & Maine R. R.....	2.23	
Ernest W. Bowditch.....	228.45	
John Brady	1,315.12	
E. P. Bryant.....	976.26	
Edward Cawley	865.63	
C. B. Coburn Co.....	4.51	
Coffin Valve Co.....	160.85	
Connors Bros.	37.50	

For Sundries:—Continued

Matthias F. Connor.....	439.37	
Howard L. Foster.....	20.00	
Daniel Gage	3.00	
C. H. Hanson & Co., Inc.....	3.00	
E. F. Hathaway.....	4.50	
Fred A. Houdlett & Son.....	152.97	
W. A. Mack Co.....	2.10	
Middlesex Auto Co.....	5.00	
Middlesex Machine Co.....	237.38	
Middlesex Registry of Deeds.....	6.00	
Geo. A. Nelson.....	7.00	
New England Nurseries.....	9.20	
New England Tel. & Tel. Co.....	2.70	
New York, New Haven & H. R. R.....	7.07	
Amasa Pratt Co.....	20.16	
Pratt & Forrest.....	31.51	
John P. Quinn.....	151.25	
Robin Hill Nursery.....	2.00	
D. T. Sullivan.....	51.47	
Charles A. Whittet.....	1.35	
James Whittet	3.04	
Wilder & Wotton.....	5.00	
	<hr/>	14,147.59
Balance to 1912.....		2,092.07
		<hr/>
		\$ 16,239.66

REPAIRING SCHOOL GROUNDS

Appropriation	\$ 500.00	
	<hr/>	\$ 500.00

Expended

For Labor:

To Sundry Persons.....	\$ 386.15	
	<hr/>	\$ 386.15

For Sundries:

Bartlett & Dow.....	\$ 4.00	
John Brady	10.00	
Fred Jenness	5.45	
Middlesex Auto Co.....	5.00	
Robin Hill Nursery.....	33.40	
Staples Bros.	56.00	
	<hr/>	113.85
		<hr/>
		\$ 500.00

BALTIMORE MARCH ANNIVERSARY

Appropriation	\$ 2,500.00	
	<hr/>	\$ 2,500.00

Expended

For Music:

Chelmsford Band	\$ 125.00
City Band	125.00
Holly Greek Regiment.....	45.00
Lowell Military Band.....	125.00
Lowell Cadet Band.....	125.00
Merrimack Fife & Drum Corps.....	40.00
National Band	125.00
Polish American Band.....	72.00

782.00

For Sundries:

App. Public Buildings.....	\$ 19.04
Butler Ames, "16-ORRP".....	40.00
Boston & Maine R. R.....	194.84
Courier-Citizen Co.	56.00
Thomas Fitzgerald	18.90
J. J. Gallagher.....	16.60
Henderson Bros.	210.00
Kimball System	10.00
T. F. McCarthy.....	17.75
Morse & Beals.....	3.00
Mary F. O'Brien.....	25.00
Charles S. Proctor.....	3.29
G. C. Prince & Son.....	15.50
Page Catering Co.....	52.60
Post 120, G. A. R.....	50.00
Post 42, G. A. R.....	50.00
J. J. Rogers.....	192.85
J. H. Sparks.....	114.00
F. A. M. Tobin's Printery.....	4.75
Union Printing Co.....	5.60
Charles F. Young & Co.....	100.00
Yorick Club	118.45

1,318.17

\$ 2,100.17

Returned to General Treasury Fund.....

399.83

\$ 2,500.00
LABOR DAY

Appropriation \$ 1,000.00

\$ 1,000.00
Expended

For Music:

Chas. A. Delaronde.....	\$ 125.00
John J. Giblin.....	125.00
R. A. Griffiths.....	125.00
Jos. H. Hibbard.....	75.00
James McHugh	70.00
Wm. Regan	125.00
J. H. Wilson.....	125.00

770.00

For Sports, Prizes, etc.:

James Brennan	\$	10.00
Chas. Farrell		20.00
B. B. Golden.....		8.00
Wm. E. Grant.....		2.00
Joseph Lafarge		20.00
Thomas Nagle		10.00
Timothy F. O'Rourke.....		10.00
Joseph A. Pion.....		15.00
John J. Quirk.....		20.00

115.00

For Sundries:

O. P. Davis.....	\$	9.00
Donovan Harness Co.....		7.50
A. R. Lopez & Bro.....		7.00
Lowell Coach Co.....		4.00
John Neeson		5.00
J. F. O'Donnell & Sons.....		31.00
Richardson Hotel		30.00
J. H. Sparks.....		3.00
Union Printing Co.....		7.50
Charles F. Young.....		10.00

114.00

999.00

Returned to General Treasury Fund..... 1.00

\$ 1,000.00
LITTLE CANADA PLAYGROUND

Appropriation	\$	100.00	
			\$ 100.00

Expended

App. Water Works.....	\$	92.58	
Geo. E. Hutchins.....		7.30	
			99.88

Returned to General Treasury Fund..... .12

\$ 100.00
COLUMBUS DAY

Appropriation	\$	500.00	
			\$ 500.00

Expended

For Music:			
American Band	\$	125.00	
Cadet Band		125.00	
City Band		125.00	
Military Band		125.00	
			\$ 500.00

9. UNCLASSIFIED

Carney Medal Fund	Portraits—G. W. Fifield and Geo.
Claims and Court Executions	Runels

CARNEY MEDAL FUND

Balance to 1911.....	\$ 200.00	
	<u> </u>	\$ 200.00
Balance to 1912.....	\$ 200.00	
	<u> </u>	\$ 200.00

CLAIMS AND COURT EXECUTIONS

Appropriation	\$ 2,814.50	
	<u> </u>	\$ 2,814.50

Expended

Matilda Anderson	\$ 200.00
John Boyle	100.00
Thomas Carmody	25.00
E. W. Clark.....	14.00
Climax Co. of Lowell.....	500.00
Bernard A. Connors.....	60.00
James Cook	25.00
Anna Cooney	100.00
James L. Crann.....	40.00
Joseph L. Crowe.....	150.00
Martin J. Crowe.....	50.00
Walter E. Guyette.....	21.10
John J. Haviland.....	75.00
Susan Hennessey	100.00
Samuel Kelley	50.00
John Mahoney	100.00
Nellie V. Merritt.....	75.00
Annie Miskella	114.00
Sam Moses	100.00
Nellie Morrill	104.00
Virginia Morris	59.40
Patrick McCarron	100.00
James P. McDonald.....	15.00
Mary O'Neil	200.00
Joseph Scellon	100.00
Mary A. Sullivan.....	75.00
Clara Tetrault	100.00
M. A. Tighe, M. D.....	12.00
John Ward	100.00
Wm. H. Wilder.....	50.00
	<u> </u>
	2,814.50

PORTRAITS

Appropriation	\$ 600.00	
	<u> </u>	\$ 600.00

Expended

Geo. McDermott	\$ 300.00	
John F. McOske.....	300.00	
	<u> </u>	\$ 600.00

10. PUBLIC SERVICE ENTERPRISES

Water Works	New Reservoir, New Wells, New
Water Works, New Pump	Pumping Station
City Weigher	Water Loan Sinking Fund

WATER WORKS

Balance from 1911.....	\$ 3,517.63	
Receipts	223,703.98	
Overdraft taken from General Treasury Fund	1,967.69	
	<u> </u>	229,189.30

Expended**For Salaries and Wages:**

Water Board		
R. J. Crowley.....	\$ 79.86	
R. Van Tassell.....	400.00	
J. G. Hill.....	400.00	
J. McDowell	400.00	
J. F. Furlong.....	320.14	
	<u> </u>	1,600.00
Robert J. Thomas, Superintendent.....	2,000.00	
John W. Crawford, Secretary.....	1,600.00	
Sundry Persons, Wages.....	107,675.86	
	<u> </u>	111,275.86

Appropriation for City Debt, Transfer.....	2,700.00
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For Interest:

Commonwealth of Massachusetts.....	\$ 940.00	
Lowell Institution for Savings.....	654.12	
Sinking Fund Com., Newton, Mass.....	200.00	
Sundry Persons, Coupons.....	50,320.00	
Taunton Savings Bank.....	100.00	
	<u> </u>	52,314.12

For Stationery, Printing, etc.:

A. R. Andrews.....	\$ 3.00	
Frank P. Bridges & Co.....	6.00	
Buckland Printing Co.....	30.00	
Butterfield Printing Co.....	91.60	
Courier-Citizen Co.	241.00	

For Stationery, Printing, etc.:—Continued

E. J. Cryan.....	6.75	
Dumas & Co.....	235.73	
Elliott Co.	46.30	
Engineering News	5.00	
Chas. E. Galley.....	.75	
R. E. Judd.....	.75	
Geo. A. Nelson.....	2.25	
G. C. Prince & Son.....	58.98	
Charles S. Proctor.....	2.75	
F. W. Shepperd Publishing Co.....	3.00	
Arthur A. Smith.....	2.00	
Smith T. & Inspection Co.....	7.75	
Union Printing Co.....	139.83	
Union Stamp Works.....	7.00	
M. G. Wight & Co.....	7.20	
		<hr/>
		897.64

For Express, Transportation, etc.:

Adams Express Co.....	\$ 7.95	
American Express Co.....	36.61	
Arthur G. Beharrell.....	14.00	
Boston & Lowell Express Co.....	2.00	
Boston & Maine R. R.....	432.44	
John Brady	18.75	
C. H. Hanson & Co., Inc.....	5.00	
James G. Hill.....	8.50	
Manchester & Concord Express Co.....	5.45	
Ed. H. Mercier.....	10.00	
Mercier's Famous Auto Livery.....	39.37	
C. K. Miller.....	40.50	
New York, New Haven & H. R. R.....	945.11	
J. H. Sparks.....	40.00	
Robert J. Thomas.....	72.70	
Wilder & Wotton.....	52.50	
		<hr/>
		1,730.88

For Lighting and Telephone:

Lowell Electric Light Corp.....	\$ 70.18	
Lowell Gas Light Co.....	22.66	
New Eng. Tel. & Tel. Co.....	153.02	
Postal Telegraph Cable Co.....	.50	
		<hr/>
		246.36

For Carriages, Harnesses and Repairing:

A. H. Cluer Est.....	\$ 115.35	
Donovan Harness Co.....	268.80	
F. B. Hill & Co.....	296.90	
Sawyer Carriage Co.....	21.98	
		<hr/>
		703.03

For Automobile Repairs:

Amos R. Bliss.....	\$ 100.00	
Church St. Automobile Co.....	16.00	
Federal Auto & Mfg. Co.....	75.00	
F. B. Hill & Co.....	121.00	
Lowell Auto Co.....	1,981.74	

For Automobile Repairs:—Continued

Moody Bridge Auto Co.....	127.38
C. J. Pihl.....	.50
Pitts Auto Supplies.....	231.17

2,652.79

For Lumber:

Burnham & Davis Lumber Co.....	\$ 34.16
Davis & Sargent Lumber Co.....	73.62
Amasa Pratt Co.....	239.09
Pratt & Forrest Co.....	25.89

372.76

For Brick, Cement, etc.:

D. T. Sullivan.....	\$ 184.80
E. A. Wilson & Co.....	585.49

770.29

For Fuel:

Edward Cawley	\$ 6,669.37
Horne Coal Co.....	132.70
Arthur D. Little, Inc.....	10.20
Joseph Mullin	70.75
Fred H. Rourke.....	31.75
D. T. Sullivan.....	1,209.25
E. A. Wilson & Co.....	2,397.55

10,521.57

For Hay, Grain, etc.:

Coffey Bros.	\$.85
J. B. Cover & Co.....	22.50
T. J. McDonald.....	6.00
Joseph Mullin	520.66
Wilder & Wotton.....	812.28

1,362.29

For Hardware, Hydrants, Meters, etc.:

Adams Hardware & Paint Co.....	\$ 9.90
Ames Iron Works.....	17.00
Ashton Valve Co.....	34.75
F. G. Baldwin.....	5.75
Bartlett & Dow.....	92.17
W. T. S. Bartlett.....	27.00
J. C. Bennett.....	324.85
Geo. F. Blake Mfg. Co.....	2.40
Boston Engineers' Supply Co.....	277.57
Boutwell Bros.	98.01
Owen E. Brennan.....	112.86
Builders' Iron Foundry Co.....	163.62
J. M. Carpenter Tap & Die Co.....	.97
Carroll Bros.	128.79
Chandler & Farquhar Co.....	68.00
Chapman Valve Mfg. Co.....	613.52
Cheney & Thomson Co.....	16.95
C. B. Coburn Co.....	155.17
W. C. Conrad.....	19.65
Curtin & Spillane.....	2.48
Darling Pump & Mfg. Co.....	17.00
Deane Steam & Pump Co.....	120.45

For Hardware, Hydrants, Meters, etc.:—Continued

Doherty Bros.	455.69
W. & B. Douglas.....	10.80
Eddy Valve Co.....	20.00
Electric Blower Co.....	55.00
Enberg's Electric & Machinery Works..	14.00
Gardner Grate Co.....	621.50
H. C. Girard Co.....	21.61
A. J. Harris & Co.....	35.13
Hersey Mfg. Co.....	1,461.23
C. F. Hoisington & Son.....	5.75
Holly Mfg. Co.....	681.00
Kennedy Valve Mfg. Co.....	37.00
Lamson Pat. Specialties Co.....	200.00
Nap. D. Lafleur.....	23.22
Leadite Co.	10.00
Locke Regulator Co.....	4.00
Lowell Machine Shop.....	16.93
Ludlow Valve Mfg. Co.....	1,284.65
Lumsden & Van Stone Co.....	110.80
Walter Macleod & Co.....	.99
Manning, Maxwell & Moore.....	16.45
J. L. Mott Iron Works.....	24.15
National Meter Co.....	2,661.40
Neptune Meter Co.....	153.25
N. W. Nercross.....	12.30
Otis Elevator Co.....	5.00
Pennichuck Water Works.....	11.15
Perrin, Seamans & Co.....	10.20
Pevey Foundry Co.....	22.36
Pittsburg Meter Co.....	151.20
Regan & Kirwin.....	7.60
Rensselaer Valve Co.....	323.40
Rice & Co.....	55.00
Scannell Boiler Works.....	1,836.09
A. P. Smith Mfg. Co.....	112.50
E. E. Smith.....	59.08
J. F. Staples.....	15.35
Staples Bros.	450.00
Thompson Hardware Co.....	57.45
John A. Thomson & Co.....	204.40
Thomson Meter Co.....	521.63
Union Water Meter Co.....	29.80
Vanderman Mfg. Co.....	8.00
Chas. E. Walsh.....	12.00
Wells Bros. Co.....	17.68
H. H. Wilder & Co.....	.50
Henry R. Worthington.....	196.50
W. Zimmer .....	.30

14,352.90

For Paints, Oils, Packings, etc.:

Boston Engineers' Supply Co.....	\$ 115.56
Owen E. Brennan.....	22.71
Cancos Mfg. Co.....	292.67

For Paints, Oils, Packings, etc.:—Continued

C. B. Coburn Co.....	1,028.43	
Garlock Packing Co.....	84.81	
Gulf Refining Co.....	50.35	
Kimball, Harrington & Osborne.....	138.24	
Arthur D. Little, Inc.....	8.55	
Lowell Waste Co.....	21.40	
Merrimaek Utilization Co.....	3.00	
Willard W. Morrison.....	12.00	
S. Obermayer Co.....	10.00	
Standard Oil Co. of N. J.....	20.48	
Valvoline Oil Co.....	236.76	
	<hr/>	2,044.96

For Refunds:

To Sundry Persons.....	\$ 429.44	
	<hr/>	429.44

For Insurance:

Wm. D. Brown.....	\$ 4.60	
Collins & Hogan.....	49.50	
Joseph F. Donohoe.....	9.00	
Thomas C. Lee & Co.....	150.00	
Henry Miller & Son.....	36.00	
Norcross & Leighton.....	244.75	
C. M. Tucke.....	350.00	
	<hr/>	843.85

For Electrical Supplies:

L. A. Derby & Co.....	\$ 5.00	
Edson Mfg. Co.....	27.00	
New Eng. Elec. & Supply Corp.....	100.16	
Tucke & Parker Co.....	12.00	
Western Electric Co.....	107.13	
	<hr/>	251.29

For Plumbing, Pipe, Fittings, etc.:

H. R. Barker Mfg. Co.....	\$ 52.25	
Boston Engineers' Supply Co.....	8.98	
Builders' Iron Foundry.....	470.66	
Carroll Bros.	119.64	
Wm. R. Conrad.....	46.94	
John A. Cotter & Co.....	4.56	
Curtin & Spillane.....	14.05	
Doherty Bros.	33.19	
Harry S. Drury.....	1,193.19	
Farrell & Conaton.....	171.89	
Fairbanks Co.	16.35	
Geo. W. Fifield.....	2.00	
Fred A. Houdlette & Son, Inc.....	2,294.18	
Edward F. Hughes.....	32.72	
John Kelley & Co.....	467.12	
Lead Lined Iron Pipe Co.....	6,904.60	
Lumsden & Van Stone Co.....	286.67	
W. A. Mack Co.....	6.00	
J. F. McMahon & Co.....	5.10	
Middlesex Machine Co.....	159.72	

For Plumbing, Pipe, Fittings, etc.:—Continued

Chas. Miller & Son Co.....	7,018.45
H. Mueller Mfg. Co.....	1.95
Nichols Foundry Co.....	42.32
Welch Bros.	5.00

19,357.53

For Sundries:

Walter Allen	\$ 164.50
App. Engineering	1,020.85
App. Streets	12.50
App. Streets, O. E.....	34.00
App. Water Works, N. P.....	265.41
Ashton Valve Co.....	22.73
F. G. Baldwin.....	17.78
Banker & Tradesman.....	5.00
F. M. Bill & Co.....	6.76
James Blakely	12.00
Harold L. Bond Co.....	31.06
Boston Engineers' Supply Co.....	245.00
John Boucher	6.40
E. P. Bryant.....	9.08
James Burns & Son.....	76.76
Chelmsford (Town)	31.14
F. O. Clark Engineering Co.....	7.90
C. B. Coburn Co.....	307.87
Collins & Hogan.....	230.00
W. C. Conrad.....	11.20
W. R. Conard.....	164.05
Courier-Citizen Co.	10.20
J. B. Cover & Co.....	16.85
John W. Crawford.....	4.95
Cross Awning & Sign Co.....	1.50
J. J. Donnelly.....	24.00
James Driscoll	37.00
Geo. W. Dudley.....	1.50
Elliott Co.	10.00
Emerson Apparatus Co.....	25.00
Henry Emond	15.00
Daniel Gage	20.99
Gauthier & Lemire.....	.50
Greenwood Mfg. & Supply Co.....	37.50
C. O. A. Grover.....	8.00
C. A. Hamblett.....	7.00
C. H. Hanson & Co., Inc.....	24.50
W. E. Hatch.....	.50
E. Howard Clock Co.....	6.00
Fred. K. G. Humphriss.....	84.00
Geo. E. Hutchins.....	.90
International Electric Co.....	18.48
J. M. Jones.....	20.79
Michael J. Kelley.....	91.00
L'Etoile Publishing Co.....	4.65
Arthur D. Little, Inc.....	48.60
Lowell General Hospital.....	18.84

For Sundries:—Continued

Lowell Machine Shop.....	5.00
Lowell Sun	17.50
Lowell Telegram	2.35
Lull & Hartford.....	1.00
J. J. McCann.....	1.90
D. P. McKenna.....	7.55
T. F. McSorley.....	5.20
Joe V. Meigs, M. D.....	46.00
Walter Mellen	69.50
Merrimack Utilization Co.....	4.92
Middlesex Machine Co.....	1.52
Morse & Beals.....	157.00
John Mountford	14.35
Willard W. Morrison.....	12.00
James Murkland & Son.....	1.60
Geo. A. Nelson.....	5.50
New Eng. Elec. & Sup. Corp.....	2.40
O'Sullivan Bros. Co.....	7.00
Pratt & Forrest Co.....	1.50
Amasa Pratt Co.....	48.17
Harry Raynes	13.00
Richardson Hotel	40.00
Sampson & Murdock Co.....	9.00
S. A. Shattuck.....	176.77
Simpson & Rowland.....	1.14
Arthur A. Smith.....	1.00
Smith Type. Inspection Co.....	2.75
E. A. & A. T. Smith.....	50.26
J. H. Sparks.....	18.50
Staples Bros.	150.00
Talbot Dye. & Chemical Co.....	13.12
Robert J. Thomas.....	26.50
John A. Thomson & Co.....	91.00
Tucke & Parker Co.....	1.00
Chas. E. Walsh.....	19.25
Waverly Hotel	4.90
Frank L. Weaver & Son.....	228.00
W. E. Westall.....	2.75
H. F. Whiting.....	27.06
Whitman & Pratt Rendering Co.....	28.14
Whittet & Co.....	40.50
Wiley & Russell Mfg. Co.....	1.45
Winchester Rock & Brick Co.....	60.53
	<hr/>
	4,638.82

Vacancy List:

To Sundry Persons.....	\$ 122.92
	<hr/>
	229,189.30

WATER WORKS, NEW PUMP

Appropriation	\$ 59,780.28
	<hr/>
	\$ 59,780.28

Expended

For Labor:

To Sundry Persons.....	\$ 7,265.13	
	<u> </u>	7,265.13

For Lumber:

Burnham & Davis Lumber Co.....	\$ 99.40	
Chas. E. Howe & Co.....	31.86	
Pratt & Forrest Co.....	90.75	
Amasa Pratt Co.....	120.18	
	<u> </u>	342.19

For Hardware, Plumbing, Pipe, etc.:

Ashton Valve Co.....	\$ 84.00	
H. R. Barker Mfg. Co.....	32.76	
Boutwell Bros.	44.01	
Builders' Iron Foundry.....	310.96	
Carroll Bros.	44.18	
Edge Moor Iron Co.....	4,100.00	
Fred A. Houdlette & Son, Inc.....	354.34	
H. W. Johnos, Manville Co.....	188.71	
Arthur P. Knapp.....	470.00	
Knowles Scale Works.....	5.85	
Ludlow Valve Mfg. Co.....	910.09	
Lumsden & Van Stone Co.....	203.34	
W. A. Mack Co.....	6.00	
Middlesex Machine Co.....	2.43	
Thompson Hardware Co.....	21.67	
Youlden, Smith & Hopkins.....	25.24	
	<u> </u>	6,803.58

For Sundries:

App. Engineering	\$ 417.39	
Sylvester Bean	27.30	
Boston & Maine R. R.....	24.32	
John Brady	45.00	
T. Larkin	7.00	
New Eng. Elec. & Supply Corp.....	243.93	
Will J. Sando.....	1,000.00	
D. T. Sullivan.....	378.80	
Valvoline Oil Co.....	18.38	
E. A. Wilson & Co.....	757.26	
	<u> </u>	2,919.38

For Pump:

Allis Chalmers Co.....	\$ 42,450.00	
	<u> </u>	42,450.00
		<u> </u>
		\$ 59,780.28

NEW WELLS AND RESERVOIR

Appropriation	\$100,000.00	
	<u> </u>	\$100,000.00

Expended

For Labor:

To Sundry Persons.....	\$ 8,687.51	
	<u> </u>	8,687.51

For Sundries:

Geo. Z. Allard.....	\$ 2,200.00	
F. G. Baldwin.....	5.30	
Bartlett & Dow.....	39.10	
Harold L. Bond Co.....	18.00	
Boston Engineers' Supply Co.....	43.70	
John Brady	467.57	
Braman, Dow & Co.....	150.00	
Edward Cawley	26.80	
Harry E. Clay.....	150.00	
Patrick Cogger	37.50	
Wm. R. Conard.....	18.98	
Connors Bros. Co.....	35.00	
Geo. Coronis	183.10	
B. F. Crosby & Co.....	38.61	
Davis & Sargent Lumber Co.....	4.05	
Elie Delisle	3.00	
Harry A. Drury.....	735.23	
Sarah E. Dunnigan and.....		
J. F. Ryan.....	485.02	
Elric and Elizabeth Elie.....	2,000.00	
Des. J. Generalis.....	150.00	
H. C. Girard Co.....	26.00	
C. H. Hanson & Co., Inc.....	27.50	
James Hickey	225.00	
Edward S. Howe.....	2,769.46	
T. G. Little.....	138.00	
E. A. Lynde.....	132.75	
Ed. H. Mercier.....	36.25	
Middlesex Registry of Deeds.....	2.95	
Michael Murphy	23.00	
John J. O'Connor.....	225.00	
Patrick O'Hearn	1,275.00	
F. S. Perkins Co.....	1.00	
Rensselaer Valve Co.....	840.00	
Rice & Co.....	30.25	
E. E. Smith Co.....	22.50	
Andrew G. Stiles, Treas.....	2.30	
Robert J. Thomas.....	8.25	
Wilder & Wotton.....	353.75	
A. Winslow & Al. Partridge.....	1,601.56	
		14,531.48
		23,218.99
Balance to 1912.....		76,781.01
		\$100,000.00

HIGH SERVICE BONDS

Appropriation	\$ 75,000.00	
		\$ 75,000.00

AUDITOR'S REPORT

Expended

\$ 75,000.00	
<u> </u>	\$ <u>75,000.00</u>

CITY WEAHER**Salary**

Appropriation	\$ 800.00	
	<u> </u>	\$ <u>800.00</u>

Expended

To George F. Noonan.....	\$ 800.00	
	<u> </u>	\$ <u>800.00</u>

Other Expenses

Appropriation	\$ 10.16	
	<u> </u>	\$ <u>10.16</u>

Expended**For Sundries:**

C. B. Coburn Co.....	\$ 1.15	
E. J. Cryan.....	.30	
G. C. Prince & Son.....	2.11	
Robertson Co.	6.60	
	<u> </u>	\$ <u>10.16</u>

11. CEMETERIES

Edson and Others

New Gate

CEMETERIES—EDSON AND OTHERS

Appropriation	\$ 8,729.70	
	\$ 8,729.70	

Expended

For Salaries and Wages:		
Robert J. Gilmore, Superintendent.....	\$ 1,300.00	
Sundry Persons, Wages.....	4,262.02	
		5,562.02

For Water, Fuel, Cement, Pipe, etc.:		
App. Water Works.....	\$ 91.68	
Edward Cawley	1.83	
Horne Coal Co.....	37.13	
Joseph Mullin	14.30	
James Stanley	1.00	
D. T. Sullivan.....	9.60	
		155.54

For Hay, Grain, etc.:		
J. B. Cover & Co.....	\$ 1.50	
Geo. M. Foster.....	1.40	
D. Gerow	18.30	
Wm. E. Livingston.....	2.55	
E. E. McCausland.....	19.60	
Joseph Mullin	32.60	
Wilder & Wotton.....	61.10	
		137.05

For Hardware, Fittings, etc.:		
H. R. Barker Mfg. Co.....	\$ 9.21	
Bartlett & Dow.....	30.70	
J. C. Bennett.....	13.46	
Boutwell Bros.	3.96	
Gustaf Carlson	5.05	
C. B. Coburn Co.....	.28	
B. F. Goodrich Co.....	61.20	
Arthur P. Knapp.....	1,363.00	
		1,486.86

For Shoeing, Carriages, Harnesses, etc.:		
E. P. Bryant.....	20.15	
Donovan Harness Co.....	21.90	
M. J. Haggerty.....	.35	
A. D. Mitten.....	26.90	
Geo. R. Morse.....	22.00	
		91.30

For Plants, Manure, Loam, Sod, Seed, etc.:

Adams Hardware & Paint Co.....	\$	22.50
E. Bibeault		83.40
Amasa A. Brown.....		14.25
Wm. Livingston		23.70
Joseph Loiselle		25.00
Charles M. Merrill.....		81.20
A. D. Mitten.....		44.72
Morse & Beals.....		35.80
Geo. F. Parsons.....		67.20
Chas. Rock		2.40

400.17

For Stationery, Printing, etc.:

Chas. E. Galley.....	\$	6.50
Library Bureau		13.13
G. C. Prince & Son.....		18.86
Shaw Stocking Co.....		7.15

45.64

For Sundries:

Adams Express Co. ....	\$	.40
American Express Co.....		1.20
Boston & Lowell Express Co.....		.45
E. P. Bryant.....		25.15
Burnham & Davis Lumber Co.....		41.88
Gustaf Carlson		6.95
E. R. Clark.....		193.15
M. D. Clay.....		32.00
C. B. Coburn Co.....		71.26
Courier-Citizen Co.		10.25
Donovan Harness Co.....		.35
W. W. Fox.....		5.00
Allan Fraser		48.88
Geo. B. Fuller.....		.75
B. S. Goodrich Co.....		51.30
John J. Gray.....		35.00
Gulf Refining Co.....		69.60
C. H. Hanson & Co., Inc.....		57.50
Albert C. Hoyt.....		2.80
Lowell Gas Light Co.....		36.63
Lowell Telegram		9.50
Ezra E. Mansur.....		50.00
S. C. Mussey.....		7.70
Mussey F. Towel Supply Co.....		3.90
New Eng. Tel. & Tel. Co.....		4.42
New York, New Haven & Hartford R. R.		.50
John P. Quinn.....		10.00
V. St. Jaques.....		.30
Sampson & Murdock Co.....		3.00
Stanley Garage		57.70
Upton & Gilman.....		.60
C. M. Young.....		13.00

851.12

\$ 8,729.70

NEW GATE

Appropriation	\$ 2,500.00	
	<u> </u>	\$ 2,500.00

Expended

Gumb Bros.	\$ 2,500.00	
	<u> </u>	\$ 2,500.00

**12. INTEREST, MUNICIPAL INDEBTEDNESS,
SINKING FUNDS**

Interest	City Debt
Temporary Loans	Sinking Funds

13. AGENCY TRUST INVESTMENTS

State Tax	Corporation Tax
Non-Resident Bank Tax	Liquor Licenses
County Tax	Grade Crossings

14. REFUNDS

Refund of Taxes	Release of Tax Titles.
Abatement of Taxes before payment. Street Watering Abatement.	

INTEREST

Appropriation	\$140,000.00	
	<u> </u>	\$140,000.00

Expended

Boston Five Cent Savings Bank.....	\$ 6,860.00
Bowery Savings Bank.....	6,000.00
Central Savings Bank.....	205.23
Commonwealth Massachusetts	2,061.00
Commissioners Sinking Funds, Haverhill....	80.00
Commissioners Sinking Fund, Holyoke.....	207.00
Commissioners Sinking Funds.....	288.82
R. L. Day & Co.....	40.00
Philip Dexter	1,737.60
Esterbrook & Co.....	4,256.44
First National Bank.....	6,691.36
Marcella Greenwood	1.68
High Street Church Treasurer.....	60.00
Holyoke Mutual Life Insurance Co.....	297.00
Home Savings Bank, Boston, Mass.....	1,947.00
Loan & Trust Co., Concord, N. H.....	342.00
Lowell Institution for Savings.....	16,439.00

Interest (Expended) — Continued

Malden Savings Bank.....	822.00	
John Nathan	40.00	
Jacob Nathan	40.00	
National Life Insurance Co.....	2,267.97	
New Hampshire Fire Insurance Co.....	1,068.74	
New York Savings Bank.....	2,000.00	
Old Colony Trust Co.....	17,209.40	
J. Peavey & Bros.....	40.00	
People's Savings Bank.....	1,200.00	
Mrs. Eliza Philbrick.....	90.00	
Prop. Forrest Hill Cemetery.....	2,088.00	
Francis R. Safford.....	225.00	
Salem Five Cent Savings Bank.....	855.00	
Somerville Savings Bank.....	284.00	
Sundry Persons, Coupons.....	52,707.00	
Trustees Estate Thomas Nesmith.....	1,500.00	
Trustees Public Burial Grounds.....	2,540.21	
John Tyler Bequest.....	600.00	
Washington Savings Institution.....	2,931.22	
Woburn Five Cent Savings Bank.....	180.00	
Worcester Five Cent Savings Bank.....	284.00	
	<hr/>	136,486.67
Returned to General Treasury Fund.....		3,513.33
		<hr/>
		\$140,000.00

TEMPORARY LOANS

Balance from 1910.....	\$ 700,000.00	
Appropriation from Loans.....	1,200,000.00	
	<hr/>	\$1,900,000.00

Expended

First National Bank.....	\$ 500,000.00	
Old Colony Trust Co.....	700,000.00	
	<hr/>	1,200,000.00
Balance to 1912.....		700,000.00
		<hr/>
		\$1,900,000.00

CITY DEBT

Appropriation	\$ 271,864.20	
	<hr/>	\$ 271,864.20
Boston Five Cent Savings Bank.....	\$ 22,100.00	
Commonwealth of Massachusetts.....	2,000.00	
Central Savings Bank.....	2,870.00	
Commissioners of Sinking Funds.....	871.30	
R. L. Day & Co.....	2,000.00	
Philip Dexter	5,430.00	
Home Savings Bank.....	11,600.00	
Loan & Trust Savings Bank.....	3,600.00	

City Debt—Continued

Lowell Institution for Savings.....	136,144.90	
Malden Savings Bank.....	2,740.00	
National Life Insurance Co.....	7,200.00	
New Hampshire Fire Insurance Co.....	7,500.00	
Old Colony Trust Co.....	18,060.00	
People's Savings Bank of Worcester.....	10,000.00	
Sewer Con., Street Paving Bond, Loan June 10, '09	12,000.00	
Somerville Savings Bank.....	7,100.00	
Sundry Persons, Bonds.....	5,130.00	
Washington Savings Bank.....	14,018.00	
Woburn Five Cent Savings Bank.....	1,500.00	
	<hr/>	\$ 271,864.20

SINKING FUNDS

Appropriation	\$ 30,500.00	
	<hr/>	\$ 30,500.00

Expended

Commissioners of Sinking Funds.....	\$ 30,500.00	
	<hr/>	\$ 30,500.00

STATE TAX

Appropriation	\$ 120,725.00	
	<hr/>	\$ 120,725.00

Expended

Commonwealth of Massachusetts.....	\$ 120,725.00	
	<hr/>	\$ 120,725.00

NON-RESIDENT BANK TAX

Appropriation	\$ 11,456.37	
	<hr/>	\$ 11,456.37

Expended

To Commonwealth of Massachusetts.....	\$ 11,353.67	
	<hr/>	11,353.67
Returned to General Treasury Fund.....		102.70
		<hr/>
		\$ 11,456.37

COUNTY TAX

Appropriation	\$ 77,079.42	
	<hr/>	\$ 77,079.42

Expended

County of Middlesex.....	\$ 77,079.42	
	<hr/>	\$ 77,079.42

CORPORATION TAX

Appropriation	\$ 89.14	
	<u> </u>	\$ 89.14

Expended

To Commonwealth of Massachusetts.....	\$ 89.14	
	<u> </u>	\$ 89.14

LIQUOR LICENSES

Appropriation	\$ 44,375.00	
	<u> </u>	\$ 44,375.00

Expended

To Commonwealth of Massachusetts.....	\$ 34,940.00	
	<u> </u>	34,940.00
Returned to General Treasury Fund.....		9,435.00
		<u> </u>
		\$ 44,375.00

GRADE CROSSINGS

Appropriation	\$ 2,564.35	
	<u> </u>	\$ 2,564.35

Expended

App. Engineering	\$ 90.99	
Arnold A. Byam.....	40.00	
John H. Davis, Thomas H. Stewart, Chas. C. Knight, Execution of Court vs. City....	2,393.36	
Geo. L. Huntoon.....	40.00	
	<u> </u>	\$ 2,564.35

REFUND OF TAXES, AFTER PAYMENT

Appropriation	\$ 128.83	
	<u> </u>	\$ 128.83

Expended

Michael Broderick	\$ 12.28	
Elizabeth Edson Est.....	29.40	
Marcella Greenwood	19.60	
Charles T. Kilpatrick.....	56.84	
Mussey Towel Supply Co.....	6.86	
Mary A. O'Brien.....	3.85	
	<u> </u>	\$ 128.83

RELEASE TAX TITLES

Appropriation	\$ 1,223.36	
	<u> </u>	\$ 1,223.36

Expended

Amos P. Best.....	\$	34.88	
Dennis E. Connors.....		182.04	
Ed. J. Connors.....		121.29	
A. S. Howard for A. P. Best.....		57.72	
D. E. Connors.....		151.63	
Wm. Williams		85.35	
Melvin G. Rogers.....		83.26	
Geo. E. Rogers.....		385.81	
Joseph Walsh		121.38	
		<hr/>	\$ 1,223.36

ABATEMENT OF TAXES BEFORE PAYMENT.

Balance from 1910.....	\$	69,920.25	
Overlay 1911		4,572.55	
Supplementary Taxes		12,311.48	
		<hr/>	86,804.28
Abated 1908 Tax	\$	2.00	
" 1909 "		584.51	
" 1910 "		2,674.41	
" 1911 "		6,515.88	
		<hr/>	9,776.80
Balance to 1912.....	\$	77,027.48	

ABATEMENT STREET WATERING

Appropriation	\$	3.91	
		<hr/>	\$ 3.91

Expended

Jennie M. Bennett.....	\$	.72	
E. E. & F. B. London.....		.93	
S. H. Merrill Heirs.....		.73	
M. A. Zimmer.....		1.53	
		<hr/>	\$ 3.91

GENERAL INFORMATION

Perpetual Care Fund.	Debt Limit.
Outstanding Accounts Due the City	Sewer Assessments, showing cost.
Cash Balance.	Real and Personal Property, Tax
Bank Balance.	Rate.
Revenue and Expense.	Loans Made.
Collections.	Expenditures.
Bond and Note Debt.	Insurance of City Property.
Trust Funds.	Assessors' Report.
Reports of Sinking Funds.	Valuation of City Property and
Temporary Loans.	City Debt.
Overlays.	

Offices in the City Hall are open from 9 a. m. until 4 p. m.

All accounts against the city should be presented not later than the first day of each month, if presented later they are very liable to go until the following month, before approval.

All accounts rendered should specify what the material and supplies were for, and for which department, and if for labor, where performed and the date.

All accounts should be carefully itemized to avoid delay in payment.

Persons whose accounts against the city have been approved should call promptly for their money, for if not called for within thirty days it is returned to the city treasury, as unclaimed.

Section 1. That all bills to be paid by the City of Lowell shall first be presented to the Commissioner of that Department contracting the same, on or before the 5th day of each month, for his approval.

Section 2. That all bills approved by the Commissioners of the several departments of the city shall present the same to the City Auditor not later than the 8th day of each month, except when such day falls on Sunday, or on a holiday; in such event, such bills may be presented on the next day following such Sunday or holiday.

Section 3. That all bills payable by the City shall be paid on the 15th day of each month.

**STATEMENT OF CITY TREASURER RELATING TO
SPECIAL FUNDS FOR CARE OF PUBLIC
BURIAL GROUNDS.**

Lowell, Mass., Jan. 1, 1912.

To the Municipal Council:

Gentlemen:—I have the honor to submit the following statement of special funds in my hands deposited for perpetual care of lots in the Public Burial Grounds of the City of Lowell:

On hand Jan. 1, 1911..... \$ 66,225.00

Received during the year from:

Edward W. Babington.....	\$ 100.00
Harry W. Bickford.....	100.00
Mrs. Mary England.....	100.00
Rufus E. Tuttle, Adm.....	100.00
L. A. Olney.....	100.00
Thomas Waterhouse, Jr.....	100.00
John W. Breen Est.....	100.00
Mary S. Haworth.....	200.00
Samuel Hazelton	100.00
Mrs. Irene Urann.....	100.00
Julia Williams	100.00
Horace R. Knowlton.....	100.00
Fred W. Noyes.....	100.00
Jennie Durant	100.00
Joel M. Scoble.....	100.00
George H. Genard.....	100.00
Chas. G. Bancroft.....	100.00
James Baxter	100.00
Mary Dix	100.00
E. Larkin	100.00
James Wilson	100.00
Frank E. Snow.....	100.00
Belle A. Richardson.....	100.00
Solon W. Stevens, Ex.....	100.00
Gertrude A. Pease.....	100.00
Mrs. M. Matheson.....	100.00
Mrs. S. M. Pendergast.....	100.00
Albert Leslie Pennoyer.....	100.00
Edward P. Sanborn.....	200.00
Chas. A. Dam.....	100.00
Ena Ross	100.00
Daniel Dix	100.00
Daniel Dix	100.00
Florence R. Baker.....	100.00
Mrs. J. H. McKinley.....	100.00
Lena A. Gookin.....	100.00
Mary J. Jones.....	100.00
Rebecca A. Goodwin.....	100.00
Jas. H. Stackpole.....	100.00
Ellen A. Stillings.....	100.00
Robert J. Young, Adm.....	100.00
Herman G. Hitchborn.....	100.00
George B. Parker.....	100.00
Lucy Jackson	100.00

Lydia J. McKinnon.....	100.00	
Jas. & Gertrude Maddocks.....	100.00	
Annie Maddox	100.00	
Ida E. Bisbee.....	100.00	
Ida E. Bisbee.....	100.00	
Jennie Taylor	100.00	
Chas. J. Weir, Ex.....	100.00	
Chas. J. Weir, Ex.....	100.00	
Mrs. Geo. W. Merrill.....	100.00	
Agnes M. Paxon.....	100.00	
Lilla Emily Thompson. Adm.....	100.00	
J. L. Porter.....	100.00	
Harry K. Noyes.....	100.00	
Lilla J. Jackson.....	100.00	
F. A. Lovejoy.....	100.00	
Phoebe W. Sanborn.....	100.00	
Nellie F. Hortt.....	100.00	
	<hr/>	6,300.00
		<hr/>
		\$ 72,525.00
		<hr/>

The following amounts are invested as follows:

City Inst. for Savings.....	\$ 9,200.00	
Washington Savings Inst.....	8,850.00	
Savings Dept. Traders' Nat. Bank.....	7,925.00	
Merrimack River Savings Bank.....	9,700.00	
Lowell Inst. for Savings.....	8,875.00	
Central Savings Bank.....	10,000.00	
Lowell Five Cent Savings Bank.....	9,275.00	
Mechanics' Savings Bank.....	8,700.00	
	<hr/>	\$ 72,525.00

Respectfully submitted,

ANDREW G. STILES,

City Treasurer and Collector of Taxes.

OUTSTANDING ASSESSMENTS

Amount of Outstanding Taxes and other Assessments Due the City

TAXES

1899	\$ 492.98	
1901	15,800.00	
1902	18,133.93	
1903	14,116.93	
1904	13,544.90	
1905	13,386.50	
1906	14,330.60	
1907	14,611.89	
1908	13,316.57	
1909	15,277.54	
1910	197,765.39	
1911	410,975.76	
	<hr/>	741,752.99

STREET WATERING ASSESSMENTS

1908	\$ 77.79	
1909	14.88	
1910	1,900.29	
1911	<u>5,777.96</u>	7,770.92

SEWER ASSESSMENTS

1885	\$ 284.88	
1894	66.80	
1895	52.15	
1896	190.66	
1898	438.32	
1900	16.53	
1902	180.49	
1903	237.28	
1906	355.26	
1909	152.90	
1910	3,636.45	
1911	<u>4,232.07</u>	9,843.79

SIDEWALK ASSESSMENTS

1903	\$ 385.89	
1907	2.65	
1911	<u>3,188.42</u>	3,576.96

MOTH ASSESSMENTS

1907	\$ 9.70	
1908	1.25	
1909	5.05	
1910	325.90	
1911	<u>1,626.78</u>	1,968.68
Miscellaneous Dept. Bills.....		<u>6,913.91</u>
Total Uncollected Bills December 31, 1911...		\$771,827.25

CITY OF LOWELL**RECONCILIATION CASH BALANCE****DECEMBER 31, 1911**

Bank Balance January 31, 1912, P. M.....	\$ 156,622.32
Cash in Drawer January 31, 1912, P. M.....	31,069.62
	<u>187,691.94</u>
Deduct Cash Receipts, January 31, 1912.....	98,166.60
	<u>89,525.34</u>
Add Expenditures, January, 1912.....	<u>64,791.11</u>

Bank Balance, December 31, 1911.....	154,316.45	
Add Outstanding Checks.....	7,922.31	
	<hr/>	
Actual Cash Balance, December 31, 1911....		162,238.76

Proof

Cash Balance, December 31, 1910, P. M.....	200,589.15	
Receipts	3,945,826.87	
	<hr/>	
	4,146,416.02	
Expenditures as per Auditor.....	3,992,099.57	
	<hr/>	
	154,316.45	
Add Outstanding Checks.....	7,922.31	
	<hr/>	
		162,238.76

Certified,

GEO. M. REX, C. P. A.**CITY OF LOWELL****RECONCILIATION BANK BALANCE****JANUARY 31, 1912**

Bank Balances as per Statements from Banks:			
Old Lowell National Bank....	\$	9,491.41	
Union National Bank.....		42,351.01	
Lowell Trust Company.....		104,444.47	
Old Colony Trust Company...		2,189.79	
		<hr/>	
		158,476.68	
Deduct Outstanding Checks...		2,190.63	156,286.05
		<hr/>	
Treasurer's Statement of Bank Balances:			
Old Lowell National Bank....		9,466.40	
Union National Bank.....		42,294.79	
Lowell Trust Company.....		102,253.84	
Old Colony Trust Company...		2,607.29	156,622.32
		<hr/>	
Difference to be reconciled....			336.27
Interest Coupon deposited in Old Colony Trust Co. charged out by them before Feb. 1, but not charged out by the Treasurer, as he had not received any charge slip of payment by the Old Colony Trust Company....		417.50	
Interest credited by Union National Bank but not entered by Treasurer	56.22		
Interest credited by the Old Lowell National Bank but not entered by the Treasurer.....	25.01	81.23	336.27

Certified,

GEO. M. REX, C. P. A.

CITY OF LOWELL
DEBT STATEMENT IN RE DEBT LIMITATION
DECEMBER 31, 1911

Limit of Debt for the year 1912:

2½ per cent. of the average valuation for the last three years..... 2,001,664.95

Total Bond and Note Debt:

December 31, 1911..... 3,482,075.80

Less Exemptions:

Water Works Debt (Gross) 1,167,500.00

City Hall and Memorial

Library (Gross) 450,000.00

High School (Gross)..... 150,000.00

New School Houses (Gross) 200,000.00 1,967,500.00 1,514,575.80

Distance from Debt

Limit 487,089.15

Certified,

GEO. M. REX, C. P. A.

CITY OF LOWELL
REVENUE AND EXPENSE OF THE CURRENT YEAR.
NOT INCLUDING RECEIPTS OR PAYMENTS ON ACCOUNT
OF LOANS OR OTHER CAPITAL ACCOUNT

Receipts from Revenue..... \$1,957,979.55

Uncollected Revenue:

Taxes \$ 410,975.76

Street Watering Assessment..... 5,770.53

Sewer Assessments 4,232.07

Sidewalk Assessments 3,188.42

Moth Assessments 1,483.65

Department Bills 6,913.91 432,564.34

Total Revenue Collected and

Uncollected 2,390,543.89

Expense of Revenue..... 2,483,872.65

Excess of Expense over

Revenue for the Year..... 93,328.76

Certified,

GEO. M. REX, C. P. A.

NOTE:—

"Revenue" includes only the true income of the city which has accrued during the current year. Part of this "Revenue" has been collected and part is still uncollected at the end of the year.

"Expense" includes only the expenditures and liabilities for current purposes incurred during the year, i. e. "running expenses," interest and debt requirements. Part of this "Expense" has been paid and part is still unpaid at the end of the year.

CITY OF LOWELL

DEPARTMENT COLLECTIONS. CURRENT & PRIOR YEARS
AND AMOUNT OF REVENUE UNCOLLECTED

DECEMBER 31, 1911

	Collected		Uncollected	
	Prior Yrs.	Current Yr.	Prior Yrs.	Current Yr.
Departments:				
Fire		\$ 342.25		
Outdoor Relief	\$ 34.73	4,339.36	\$1,126.06	\$ 437.60
Sidewalk Assessments..	2,433.49	4,537.05	388.54	3,188.42
Streets & Highways....	398.63	1,987.60	542.00	175.58
Sewer Assessments	10,879.08	1,540.86	3,680.86	4,232.07
Sewers	1,312.66	665.11	116.70	4.00
City Clerk		1,999.15		
Lighting		20.00	18.00	
Wire Health	70.00	6,399.21	10.00	185.85
Street Watering	5,531.54	13,231.08	2,972.76	5,770.53
Mayor		716.00		
City Sealer		590.20		
City Weigher		50.20		
Liquor Licenses		139,757.00		
Police		14,109.81	57.25	43.25
Public Buildings		2,796.87	113.00	18.00
Schools	280.00	6,712.06	20.00	829.34
Charity Hospitals	98.51	1,693.45	1,480.42	748.79
Cemetery	3,347.75	6,793.58	4,198.00	4,473.50
Totals	24,386.39	208,300.84	14,723.59	20,104.93

Certified,

GEO. M. REX, C. P. A.

CITY OF LOWELL

SUMMARY OF BOND AND NOTE DEBT

JANUARY 1, 1911—DECEMBER 31, 1911, WITH INTERMEDIATE TRANSACTIONS

	Original Amount	Amount Outstanding 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911	Sinking Funds Dec. 31, 1911	Net Outstanding Dec. 31, 1911
Matured in 1911.....	216,100.00	21,610.00	21,610.00			
Serials:						
Maturing in 1912	194,385.00	38,877.00	19,438.50	19,438.50		19,438.50
" " 1913	310,800.00	93,246.00	31,082.00	62,164.00		62,164.00
" " 1914	181,900.00	72,760.00	18,190.00	54,570.00		54,570.00
" " 1915	306,150.00	153,075.00	30,615.00	122,460.00		122,460.00
" " 1916	164,460.00	94,176.00	16,446.00	77,730.00		77,730.00
" " 1917	341,500.00	241,850.00	34,550.00	207,300.00		207,300.00
" " 1918	189,413.00	151,530.40	18,941.30	132,589.10		132,589.10
" " 1919	172,900.00	155,610.00	17,290.00	138,320.00		138,320.00
" " 1920	181,000.00	181,000.00	18,100.00	162,900.00		162,900.00
" " 1921	312,450.00			**312,450.00		312,450.00
Department Deficiencies ..	429,014.00	231,555.60	42,901.40	188,654.20		188,654.20
Temporary Tax Loans....	1,900,000.00	700,000.00	*1,200,000.00	**700,000.00		700,000.00
Bequests	36,000.00	36,000.00		36,000.00		36,000.00
Public Buildings	800,000.00	800,000.00		800,000.00	436,031.80	363,968.20
Water Works	1,262,000.00	1,151,200.00	83,700.00	*1,167,500.00	582,354.61	585,145.39
Total	6,998,072.00	4,122,490.00	1,552,864.20	4,182,075.80	1,018,386.41	3,163,689.39

*\$100,000.00 issued in 1911.

**Issued in 1911.

°Issued and paid in 1911.

CITY OF LOWELL

LOANS WHICH MATURED IN 1911

	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstand'g 1/1/11	Principal Paid in 1911
Woodward Ave. Sewer.....	May 4, 1901	May 4, 1911	Serial	8,700.00	3½	870.00	870.00	870.00
Sewers, Underground Wires and Paving Aiken Street..	May 23, 1901	May 23, 1911	"	36,000.00	3.25	3,600.00	3,600.00	3,600.00
Repairs to Pawtucket Bridge, City Stables, High School Annex	July 27, 1901	July 27, 1911	"	59,500.00	3¼	5,950.00	5,950.00	5,950.00
Paving Broadway and Suffolk Streets	Aug. 19, 1901	Aug. 19, 1911	"	55,000.00	3.30	5,500.00	5,500.00	5,500.00
Macadamizing Nesmith and Rogers Streets, Improving Rifle Range	Aug. 19, 1901	Aug. 19, 1911	"	15,000.00	3.30	1,500.00	1,500.00	1,500.00
Fort Hill Park.....	Nov. 15, 1901	Nov. 15, 1911	"	29,900.00	3.3/10	2,990.00	2,990.00	2,990.00
Macadamizing Streets	Dec. 20, 1901	Dec. 20, 1911	"	12,000.00	3.30	1,200.00	1,200.00	1,200.00
Total				216,100.00		21,610.00	21,610.00	21,610.00

CITY OF LOWELL

LOANS MATURING 1912

	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstanding 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911
Sewer Construction, Repairing Police Station and Signal Boxes	June 3, 1902	June 3, 1912	Serial	63,900.00	3 1/4	6,390.00	12,780.00	6,390.00	6,390.00
Fort Hill Extension	July 14, 1902	July 14, 1912	"	5,000.00	3 1/4	500.00	1,000.00	500.00	500.00
Paving Kirk Street, Corporation Tax									
3d & Andover Sts.	Sept. 4, 1902	Sept. 4, 1912	"	55,480.00	3 3/8	5,548.00	11,096.00	5,548.00	5,548.00
Sewer Construction, Repairing School, Fire Houses, Merrimack and Pleasant Streets	Sept. 11, 1902	Sept. 11, 1912	"	61,655.00	3 3/8	6,165.50	12,331.00	6,165.50	6,165.50
Repairing Comfort Station, Grading Parker Street	Nov. 4, 1902	Nov. 4, 1912	"	8,350.00	3 1/2	835.00	1,670.00	835.00	835.00
Total				194,385.00		19,438.50	38,877.00	19,438.50	19,438.50

CITY OF LOWELL

LOANS MATURING 1913

	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstanding 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911
Sewer Construction, New Sidewalks, Macadamizing Sts., Schools	June 1, 1903	June 1, 1913	Serial	97,700.00	3 ⁵ / ₈	9,770.00	29,310.00	9,770.00	19,540.00
General T'sury Fund	July 1, 1903	July 1, 1913	"	135,000.00	4	13,500.00	40,500.00	13,500.00	27,000.00
Sewer Construction	Sept. 26, 1903	Sept. 26, 1913	"	25,000.00	3.9/10	2,500.00	7,500.00	2,500.00	5,000.00
Cemeteries and Macadamizing Streets.	Nov. 13, 1903	Nov. 13, 1913	"	8,620.00	3 ⁷ / ₈	862.00	2,586.00	862.00	1,724.00
Repairing Police Station, Land for School House, Repairing Bldgs. and Paving Streets ...	Sept. 8, 1903	Sept. 8, 1913	"	44,500.00	3 ⁷ / ₈	4,450.00	13,350.00	4,450.00	8,900.00
Total				310,820.00		31,082.00	93,246.00	31,082.00	62,164.00

CITY OF LOWELL

LOANS MATURING 1914

	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstanding 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911
Sewer Construction.	May 24, 1904	May 24, 1914	Serial	50,000.00	35/8	5,000.00	20,000.00	5,000.00	15,000.00
Streets, Sewers, Underground Wires,	Aug. 9, 1904	Aug. 9, 1914	"	79,000.00	35/8	7,900.00	31,600.00	7,900.00	23,700.00
Police									
Repairing Steamers,									
New School House,									
Highland Fire Dept.									
and Underground									
Wires	Nov. 5, 1904	Nov. 5, 1914	"	52,900.00	35/8	5,290.00	21,160.00	5,290.00	15,870.00
Total				181,900.00		18,190.00	72,760.00	18,190.00	54,570.00

CITY OF LOWELL

LOANS MATURING 1915

	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstanding 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911
Ennell Street School	Apr. 6, 1905	Apr. 6, 1915	Serial	60,000.00	3 3/8	6,000.00	30,000.00	6,000.00	24,000.00
Sewers, Streets and Centralville Bridge	June 1, 1905	June 1, 1915	"	71,500.00	3 1/2	7,150.00	35,750.00	7,150.00	28,600.00
School Houses, Sewers and Streets...	Sept. 26, 1905	Sept. 26, 1915	"	83,300.00	3 1/2	8,330.00	41,650.00	8,330.00	33,320.00
Schools, Gormley Land	Oct. 26, 1905	Oct. 26, 1915	"	77,400.00	3 1/2	7,740.00	38,700.00	7,740.00	30,960.00
Lang land, Schools. Repairs to School Houses, Extension of Ina and W. 10th Streets	Nov. 28, 1905	Nov. 28, 1915	"	2,200.00	3 1/2	220.00	1,100.00	220.00	880.00
	Dec. 30, 1905	Dec. 30, 1915	"	11,750.00	3 1/2	1,175.00	5,875.00	1,175.00	4,700.00
Total				306,150.00		30,615.00	153,075.00	30,615.00	122,460.00

CITY OF LOWELL

LOANS MATURING 1916

Assumed by City on account of Tewks-	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstand'g 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911
bury Annex	July 9, 1906	July 9, 1916	Serial	15,000.00	3 1/2	1,500.00	4,500.00	1,500.00	3,000.00
Macadamizing Sts...	Aug. 7, 1906	Aug. 7, 1916	"	15,300.00	4 1/4	1,530.00	9,180.00	1,530.00	7,650.00
Sewer Construction.	Aug. 7, 1906	Aug. 7, 1916	"	30,000.00	4 1/4	3,000.00	18,000.00	3,000.00	15,000.00
Paving Moody St...	Oct. 2, 1906	Oct. 2, 1916	"	26,700.00	4 1/8	2,670.00	16,020.00	2,670.00	13,350.00
Sewer Construction.	May 8, 1906	May 8, 1916	"	40,000.00	4	4,000.00	24,000.00	4,000.00	20,000.00
Sewer Construction									
Tewksbury State									
and County Tax...	Dec. 29, 1906	Dec. 29, 1916	"	5,800.00	4	580.00	3,480.00	580.00	2,900.00
Wigginville School									
House, Repairs En-									
nell Street School									
House, City Stables,									
High School, 4th of									
July, Moths and									
Perry Street	July 20, 1906	July 20, 1916	"	31,660.00	4 1/4	3,166.00	18,996.00	3,166.00	15,830.00
Total				164,460.00		16,446.00	94,176.00	16,446.00	77,730.00

CITY OF LOWELL

LOANS MATURING 1917

	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstanding 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911
New Sidewalks.....	June 1, 1907	June 1, 1917	Serial	10,000.00	4	1,000.00	7,000.00	1,000.00	6,000.00
Sewer Construction.	June 1, 1907	June 1, 1917	"	20,000.00	4	2,000.00	14,000.00	2,000.00	12,000.00
Macadamizing Sts..	Aug. 1, 1907	Aug. 1, 1917	"	25,000.00	4 1/2	2,500.00	17,500.00	2,500.00	15,000.00
Repairing Public Buildings	Aug. 1, 1907	Aug. 1, 1917	"	12,500.00	4 1/2	1,250.00	8,750.00	1,250.00	7,500.00
Repairing Central St.	Aug. 1, 1907	Aug. 1, 1917	"	9,500.00	4 1/2	950.00	6,650.00	950.00	5,700.00
Sewer Construction.	Aug. 10, 1907	Aug. 10, 1917	"	25,000.00	4 1/2	2,500.00	17,500.00	2,500.00	15,000.00
New Steam Fire Engine	Aug. 24, 1907	Aug. 24, 1917	"	5,500.00	4 1/2	550.00	3,850.00	550.00	3,300.00
Schools, Fire, Cemetries and Health.	Nov. 1, 1907	Nov. 1, 1917	"	116,000.00	4 1/2	11,600.00	81,200.00	11,600.00	69,600.00
Nw Stables & Parks	Nov. 1, 1907	Nov. 1, 1917	"	6,000.00	4 1/2	600.00	4,200.00	600.00	3,600.00
Moths	Dec. 5, 1907	Dec. 5, 1917	"	1,500.00	4 1/2	150.00	1,050.00	150.00	900.00
City Hospital Sheds	Dec. 14, 1907	Dec. 14, 1917	"	3,500.00	4 1/2	350.00	2,450.00	350.00	2,100.00
Centralville Fire House	Dec. 16, 1907	Dec. 16, 1917	"	36,000.00	4 3/4	3,600.00	25,200.00	3,600.00	21,600.00
New Highland Sch'l	Dec. 16, 1907	Dec. 16, 1917	"	75,000.00	4 3/4	7,500.00	52,500.00	7,500.00	45,000.00
Total				341,500.00		34,550.00	241,850.00	34,550.00	207,300.00

CITY OF LOWELL

LOANS MATURING 1918

	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstanding 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911
Macadamizing Sts..	May 15, 1908	May 15, 1918	Serial	12,000.00	4	1,200.00	9,600.00	1,200.00	8,400.00
Sewer Construction	May 15, 1908	May 15, 1918	"	75,000.00	4	7,500.00	60,000.00	7,500.00	52,500.00
Paving Central St..	May 15, 1908	May 15, 1918	"	19,000.00	4	1,900.00	15,200.00	1,900.00	13,300.00
Sewer Construction	June 10, 1908	June 10, 1918	"	20,000.00	4	2,000.00	16,000.00	2,000.00	14,000.00
Repairs to School Houses, City Hospital and various Departments	June 10, 1908	June 10, 1918	"	7,400.00	4	740.00	5,920.00	740.00	5,180.00
Monument Square Improvements	Aug. 1, 1908	Aug. 1, 1918	"	3,500.00	4	350.00	2,800.00	350.00	2,450.00
School House and Public Building Repairs	Aug. 1, 1908	Aug. 1, 1918	"	7,300.00	4	730.00	5,840.00	730.00	5,110.00
Paving Middlesex St.	Aug. 1, 1908	Aug. 1, 1918	"	25,000.00	4	2,500.00	20,000.00	2,500.00	17,500.00
Paving Westford St.	Aug. 1, 1908	Aug. 1, 1918	"	11,500.00	4	1,150.00	9,200.00	1,150.00	8,050.00
Macadamizing Sts...	Aug. 1, 1908	Aug. 1, 1918	"	7,000.00	4	700.00	5,600.00	700.00	4,900.00
Claims for Damages	Dec. 30, 1908	Dec. 30, 1918	"	1,713.00	4	171.30	1,370.40	171.30	1,199.10
Total				189,413.00		18,941.30	151,530.40	18,941.30	132,589.10

CITY OF LOWELL

LOANS MATURING 1919

	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstanding 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911
Sewer Construction and Street Paving.	June 10, 1909	June 10, 1919	Serial	120,000.00	3 1/2	12,000.00	108,000.00	12,000.00	96,000.00
	Sept. 1, 1909	Sept. 1, 1919	R. & C.	50,000.00	4	5,000.00	45,000.00	5,000.00	40,000.00
Part Loan, Repairs Cabot St. Bridge..	Sept. 1, 1909	Sept. 1, 1919	Serial	900.00	4	90.00	810.00	90.00	720.00
Little Canada Park	Dec. 6, 1909	Dec. 6, 1919	"	2,000.00	4 1/4	200.00	1,800.00	200.00	1,600.00
Total				172,900.00		17,290.00	155,610.00	17,290.00	138,320.00

CITY OF LOWELL

LOANS MATURING 1920

	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstanding 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911
Paving Streets	May 1, 1910	May 1, 1920	Serial	68,000.00	4	6,800.00	68,000.00	6,800.00	61,200.00
Sewer	May 1, 1910	May 1, 1920	R. & C.	50,000.00	4	5,000.00	50,000.00	5,000.00	45,000.00
Bridge Rebuilding..	Sept. 1, 1910	Sept. 1, 1920	Serial	40,400.00	4	4,040.00	40,400.00	4,040.00	36,360.00
Police, Fire Dept.	Dec. 1, 1910	Dec. 1, 1920	"	2,600.00	4	260.00	2,600.00	260.00	2,340.00
Improvement									
Shed Playground,									
Police & Fire Dept.	Dec. 1, 1910	Dec. 1, 1920	"	20,000.00	4	2,000.00	20,000.00	2,000.00	18,000.00
Improvement									
Total				181,000.00		18,100.00	181,000.00	18,100.00	162,900.00

CITY OF LOWELL

LOANS MATURING 1921

	Date	Maturity	Kind	Original Amount;	Rate	Annual Payment	Principal Outstanding 1/1/11	Principal Paid 1912	Principal Due Dec. 31 1911
Sewer	May 1, 1911	May 1, 1921	Serial C.	50,000.00	4	5,000.00			50,000.00
Hassam	75,000.00 }								
Paving	6,500.00 }								
Macadamizing	35,000.00 }								
Fire Auto ...	2,000.00 }								
	June 1, 1911	June 1, 1921	Serial R.&C.	118,500.00	4	11,850.00			118,500.00
Shedd Play-ground	10,000.00 }								
Gen'al T'sury Fund	14,000.00 }								
Race Street Fire House..	20,000.00 }								
Bridge Re-pairs	17,000.00 }								
School and Fire Houses	Sept. 1, 1911	Sept. 1, 1921		23,500.00	4	2,350.00			23,500.00
Streets	6,450.00 }								
Buildings ...	3,000.00 }								
Sewers	20,000.00 }								
Departments .	Dec. 1, 1911	Dec. 1, 1921		76,450.00	4	7,645.00			76,450.00
Total .	47,000.00 }								
				312,450.00		31,245.00			312,450.00

CITY OF LOWELL
DEPARTMENT DEFICIENCIES

Department Deficiencies	Date	Maturity	Kind	Original Amount	Rate	Annual Payment	Principal Outstanding 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911
.....	Dec. 31, 1902	Dec. 31, 1912	Serial	20,000.00	3.55	2,000.00	4,000.00	2,000.00	2,000.00
			Note						
"	Dec. 31, 1903	Dec. 31, 1913	"	76,500.00	3.90	7,650.00	22,950.00	7,650.00	15,300.00
"	Dec. 31, 1904	Dec. 31, 1914	"	72,514.00	3 ⁵ / ₈	7,251.40	29,005.60	7,251.40	21,754.20
"	Dec. 30, 1905	Dec. 30, 1915	"	54,000.00	3 ¹ / ₂	5,400.00	27,000.00	5,400.00	21,600.00
"	Dec. 19, 1906	Dec. 19, 1916	"	71,000.00	4	7,100.00	42,600.00	7,100.00	35,500.00
"	Dec. 31, 1907	Dec. 31, 1917	"	20,000.00	5	2,000.00	14,000.00	2,000.00	12,000.00
School, Health and Charity	Nov. 16, 1908	Nov. 16, 1918	"	115,000.00	4	11,500.00	92,000.00	11,500.00	80,500.00
Total				429,014.00		42,901.40	231,555.60	42,901.40	188,654.20

CITY OF LOWELL

TEMPORARY TAX LOANS

	Date	Maturity	Original Amount	Rate	Principal Outstand'g 1/1/11	Principal Paid 1911	Principal Outstand'g 12/31/11
Temporary Tax Loan....	July 7, 1910	July 7, 1911	700,000.00	4.34	700,000.00	700,000.00	
" " "	Mar. 6, 1911	Nov. 6, 1911	200,000.00	3.14		200,000.00	
" " "	Apr. 14, 1911	Nov. 14, 1911	200,000.00	3.23		200,000.00	
" " "	July 1, 1911	Dec. 1, 1911	100,000.00	3.45		100,000.00	
" " "	July 1, 1911	July 1, 1912	700,000.00	3.75			700,000.00
Total			1,900,000.00		700,000.00	1,200,000.00	700,000.00

CITY OF LOWELL BEQUESTS

	Date	Maturity	Original Amount	Rate	Principal Outstand'g 1/1/11	Principal Due Dec. 31 1911
Thomas Nesmith Fund.....	April 10, 1871		1,000.00	6	1,000.00	1,000.00
" "	Mar. 6, 1871		25,000.00	6	25,000.00	25,000.00
Jonathan Tyler Fund.....	May 10, 1878		10,000.00	6	10,000.00	10,000.00
Total			36,000.00		36,000.00	36,000.00

CITY OF LOWELL

PUBLIC BUILDINGS

	Date	Maturity	Kind	Original Amount	Rate	Principal Outstand'g 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911	Sink'g Fund Dec. 31 1911	Net Amount Debt 12/31 1911
City Hall & Memorial	Oct. 1, 1890	Oct. 1, 1920	R.&C.	450,000.00	4	450,000.00		450,000.00	270,423.72	179,576.28
High School ...	Apr. 1, 1891	Apr. 1, 1921	C.	150,000.00	4	150,000.00		150,000.00	90,082.91	59,917.09
New School										
Houses	July 1, 1896	July 1, 1926	Reg.	200,000.00	4	200,000.00		200,000.00	75,525.17	124,474.83
Total				800,000.00		800,000.00		800,000.00	436,031.80	363,968.20

CITY OF LOWELL

WATER WORKS DEBT

	Date	Maturity	Kind	Original Amount	Rate	Principal Outstand'g 1/1/11	Principal Paid 1911	Principal Due Dec. 31 1911	Sink'g Fund Dec. 31 1911	Net Amount Due Dec. 31 1911
High Service										
Water Works.	Nov. 1, 1881	Nov. 1, 1911	R.&C.	75,000.00	4	75,000.00	75,000.00			
Water Loan...	Nov. 1, 1890	Nov. 1, 1920	R.&C.	1,000,000.00	4	1,000,000.00		1,000,000.00	582,354.61	417,645.39
Tewksbury Ex- tension Water Works Service	Nov. 9, 1906	Nov. 9, 1916	Serial Note	27,000.00	4 1/8	16,200.00	2,700.00	13,500.00		13,500.00
Water Works New Pump ..	Dec. 1, 1910	Dec. 1, 1920	"	60,000.00	4	60,000.00	6,000.00	54,000.00		54,000.00
Pumping Sta- tion Engine, Reservoir ...	Aug. 1, 1911	Aug. 1, 1921	"	100,000.00	4	New Loan		100,000.00		100,000.00
Total ...				1,262,000.00		1,151,200.00	83,700.00	1,167,500.00	582,354.61	585,145.39

TRUST FUNDS

Full value of all Sinking Funds Jan. 1, 1912	\$1,018,386.41	
Full value of all Sinking Funds Jan. 1, 1911	<u>1,030,189.95</u>	
Decrease during the year.....		\$ <u>11,803.54</u>
Value of the Water Loan Sinking Fund		
Jan. 1, 1912.....	\$ 582,354.61	
Value of the Water Loan Sinking Fund		
Jan. 1, 1911.....	<u>625,373.04</u>	\$ <u>43,018.43</u>
Value of all other Sinking Funds Jan. 1,		
1912	\$ 436,031.80	
Value of all other Sinking Funds Jan. 1,		
1911	<u>404,816.91</u>	<u>31,214.89</u>
Total decrease		\$ <u>11,803.54</u>

Water Loan Sinking Fund

Value of fund Jan. 1, 1912.....	\$ 582,354.61	
Securities belonging to this fund.....		578,199.10
Cash on deposit at Appleton National Bank		<u>4,155.51</u>
		<u>\$582,354.61</u>

High Service Water Loan Sinking Fund

Value of fund Jan. 1, 1912.....	\$ 84,635.37	
Cash paid City of Lowell to close Sinking		
Fund		\$ <u>84,635.37</u>

City Hall and Memorial Building Fund

Value of fund Jan. 1, 1912.....	\$ 270,423.72	
Securities belonging to this fund.....		267,600.00
Cash on deposit at Appleton National Bank		<u>2,823.72</u>
		<u>\$270,423.72</u>

High School Sinking Fund

Value of fund Jan. 1, 1912.....	\$ 90,082.91	
Securities belonging to this fund.....		89,000.00
Cash on deposit at Appleton National Bank		<u>1,082.91</u>
		\$ <u>90,082.91</u>

TRUST FUNDS—Continued**New School Houses Sinking Fund**

Value of fund Jan. 1, 1912.....	\$ 75,525.17	
Securities belonging to this fund.....		74,000.00
Cash on deposit at Appleton National Bank		1,525.17
		<u>\$ 75,525.17</u>

Hapgood Wright Centennial Trust Fund

Resolution adopted by the City Council, March 14, 1876: "The sum of \$1,000.00 be accepted from Hapgood Wright, under the conditions specified by him, that the money be placed at interest for 50 years and at the end of that time the interest to be spent by the City Council (by a two-third vote) for the benefit of the City or its citizens, but the original \$1,000.00 to be always kept on deposit and the interest only to be spent by the City Council at the end of each 50 years."

Value of fund Jan. 1, 1912.....	\$ 4,293.69	
Cash on deposit Lowell Institution for Savings		862.04
Cash on deposit City Institution for Savings		3,431.65
		<u>4,293.69</u>
Increase during the year 1912....	\$ 166.70	

Public Burial Ground Fund

Value of fund Jan. 1, 1912.....	\$ 72,525.00	
Savings Bank Accounts valued at.....		\$ 72,525.00

JOHN DAVIS FUND**Registered Bonds**

Name	Due	Rate	Par Value	Present Value	
City of Boston ...	1919	3½	10,000.00	97½	9,750.00
Boston & Maine					
R. R.	1944	4½	11,000.00	103¾	11,412.50
" "	1926	4	10,000.00	96	9,600.00
" "	1929	4½	5,000.00	102½	5,125.00
Boston & Albany					
R. R.	1952	3½	4,000.00	92¼	3,685.00
N. Y., N. H. & H.					
R. R.	1954	4	10,000.00	100	10,000.00
" "	1914	4	10,000.00	99¾	9,975.00
Illinois Central					
R. R.	1952	3½	10,000.00	86¾	8,675.00
					<u>68,222.00</u>

TRUST FUNDS—Continued**Railroad Stocks**

No. Shares	Name	Par Value	Present Value
41	Boston & Maine R.R. (common)	100	100 4,100.00
39	Boston & Albany R. R.	100	222 8,658.00
1	Nashua & Lowell.....	100	247 247.00
1	Concord & Montreal (4th class)	100	160 160.00
			<hr/> 13,165.00

Manufacturing Stocks

50	Merrimack (common)	100	40 $\frac{1}{4}$	2,012.50
3	Bleachery	100	210 $\frac{1}{2}$	631.50
4	Middlesex	100	75 $\frac{1}{4}$	301.00
49	Bigelow Carpet	100	171	8,379.00
			<hr/>	11,324.00

Other Stocks

12	American Tel. & Tel. Co.....	100	148 $\frac{1}{2}$	1,782.00
3	Lowell Gas Co.....	100	300	900.00
6	Nat. Bank & Commerce.....	100	173 $\frac{1}{2}$	1,041.00
9	Appleton Nat. Bank.....	100	105	945.00
3	Old Lowell Nat. Bank.....	100	105	315.00
2	Wamesit Nat. Bank.....	100	100	200.00
11	Union Nat. Bank.....	100	180	1,980.00
10	First Nat. Bank, W. Newton.	100	140	1,400.00
			<hr/>	8,563.00

Miscellaneous

Central Savings Bank Book 35073.....		674.86
Mortgage Notes, M. & P. J. M.....	75.00	
" A. H.	2,000.00	
" M. M. & D. W. R.....	650.00	
		<hr/> 2,725.00
Cash in Bank.....		2,192.46
Silverware and Jewelry.....		90.15
		<hr/> \$106,956.97

REPORT OF THE COMMISSIONERS OF THE SINKING FUNDS FOR THE YEAR 1911

Lowell, Mass., Jan. 1, 1912.

To the Municipal Council of the City of Lowell:

Gentlemen:—The Commissioners of Sinking Funds of the City of Lowell have the honor to submit the following report of the several Sinking Funds of said City and of the Hapgood Wright Centennial Trust Fund for the year 1911.

Full value of all Sinking Funds Jan. 1, 1912	\$1,018,386.41	
Full value of all Sinking Funds Jan. 1, 1911	1,030,189.95	
Decrease during the year.....	11,803.54	11,803.54
Value of the Water Loan Sinking Funds Jan. 1, 1912.....	582,354.61	
Value of the Water Loan Sinking Funds Jan. 1, 1911.....	625,373.04	
Decrease during the year 1911.....	43,018.43	43,018.43
Value of all other Sinking Funds Jan. 1, 1912	436,031.80	
Value of all other Sinking Funds Jan. 1, 1911	404,816.91	
Increase during the year 1911.....	31,214.89	31,214.89
Total decrease as above.....		11,803.54
Value of the Hapgood Wright Centennial Trust Fund Jan. 1, 1912.....	4,293.69	
Value of the Hapgood Wright Centennial Trust Fund Jan. 1, 1911.....	4,126.99	
Increase during the year 1911.....		166.70

During the year the High Service Water Loan Sinking Fund has been closed.

A Statement of the receipts, payments and present value of the several Sinking Funds and a list of the securities in each fund follows:

CITY OF LOWELL

SINKING FUNDS DECEMBER 31, 1911

Securities:

Water Loan Sinking Fund.....	\$ 578,199.10
City Hall and Memorial Building Sink- ing Fund	267,600.00
Lowell High School Sinking Fund.....	89,000.00
New School House Sinking Fund.....	74,000.00

Total Value of Securities at Par.....	1,008,799.10
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Cash:

Water Loan Sinking Fund.....	\$	4,155.51
City Hall and Memorial Building Sinking Fund		2,823.72
Lowell High School Sinking Fund.....		1,082.91
New School Houses Sinking Fund.....		1,525.17

Total Cash		<u>9,587.31</u>
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Total Sinking Funds December 31, 1911..		<u>1,018,386.41</u>
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CITY OF LOWELL

SINKING FUNDS JANUARY 1, 1911—DECEMBER 31, 1911

Sinking Funds Jan. 1, 1911.....		\$1,030,189.95
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Received:

From Investments	\$	44,268.62	
From Bank Deposit Interest.....		550.94	
From Appropriations		30,500.00	75,319.56
			<u>1,105,509.51</u>

Paid:

*To the City, Payment of High Water Service Bonds		86,808.73	
Premium on Purchases.....		144.70	
Interest on Purchases.....		169.67	87,123.10
			<u>1,018,386.41</u>

Sinking Funds Dec. 31, 1911.....		<u>1,018,386.41</u>
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* The Outstanding Bonds amounted to \$75,000.00, but as the fund to pay these bonds amounted to \$86,808.73, the entire amount was paid by the Sinking Fund Commissioners to the City Treasury.

SINKING FUNDS

INCOME ON SECURITIES

Income as it should be for 1911.....		\$	44,396.12
Income not received:			
City of Chicago.....	\$	225.00	225.00
Income in Account 1911 belonging to Account 1910:			
City of Lowell.....		80.00	
Illinois Central		17.50	97.50
			<u>44,268.62</u>
Actual Income received during 1911 from Investments			<u>44,268.62</u>
Amount entered on Sinking Fund books as having been received.....			<u>44,268.62</u>

SINKING FUNDS**INCOME FROM BANK DEPOSITS****JANUARY 1, 1911, TO SEPTEMBER 30, 1911, INCLUSIVE**

Water Loan:	
From Appleton National Bank.....	\$ 286.23
High Service Water Loan:	
From Appleton National Bank.....	61.20
City Hall and Memorial Building:	
From Appleton National Bank.....	115.40
Lowell High School:	
From Appleton National Bank.....	49.97
New School Houses:	
From Appleton National Bank.....	38.14
Total	<u>\$ 550.94</u>

SINKING FUNDS**INCOME FROM APPROPRIATIONS****JANUARY 1, 1911, TO DECEMBER 31, 1911**

Water Loan	\$ 16,000.00
City Hall and Memorial Building Loan.....	7,500.00
Lowell High School Loan.....	3,000.00
New School Houses Loan.....	4,000.00
Total	<u>\$ 30,500.00</u>

WATER LOAN SINKING FUND

	Securities	Cash	Total
On hand Jan. 1, 1911.....	\$539,370.40	\$ 1,367.27	\$540,737.67
Cash—Annual Appropriation ...		16,000.00	
Income on Investments...		23,981.88	
Income on Bank Deposits.		286.23	
Securities bought in 1911	90,000.00		
Securities matured in 1911		51,171.30	
		<u>92,806.68</u>	
Paid for securities in 1911.....		<u>88,651.17</u>	
On hand Jan. 1, 1912.....	\$578,199.10	\$ 4,155.51	\$582,354.61
Increase during 1911.....			<u>41,616.94</u>

Securities belonging to this Fund:

4 City of Lewiston, coupon bonds 5 per cent...	\$ 4,000.00
3 Boston & Maine R. R., coupon bonds, 4 per cent.	3,000.00

12	Town of Athol, coupon bonds, 4 per cent....	12,000.00
15	City of Portsmouth, coupon bonds, 4 per cent.	15,000.00
14	City of Waterville, coupon bonds, 4 per cent.	14,000.00
1	City of Boston, registered bond, 4 per cent..	61,000.00
5	City of Saginaw, coupon bonds, 4 per cent...	5,000.00
8	C. B. & Q. R. R., coupon bonds, 4 per cent...	8,000.00
4	Illinois Central R. R., coupon bonds, 4 per cent.	4,000.00
1	Boston & Maine R. R., registered bond, 4½ per cent.	10,000.00
30	No. Western Union R. R., coupon bonds, 7 per cent.	15,000.00
9	N. Y., Lack. & West. R. R., coupon bonds, 6 per cent.	9,000.00
5	Town of Sharon, coupon bonds, 4 per cent...	5,000.00
2	St. Johnsbury & Lake Champlain, coupon bonds, 5 per cent.....	2,000.00
15	Lynn & Boston St. R. R., coupon bonds, 5 per cent.	15,000.00
20	Illinois Central R. R., coupon bonds, 3½ per cent.	20,000.00
60	N. Y., N. H. & H. R. R., coupon bonds, 4 per cent.	60,000.00
35	Boston Elevated, coupon bonds, 4 per cent..	35,000.00
8	C. B. & Q. R. R., coupon bonds, 4 per cent...	8,000.00
48	Town of Northfield, coupon bonds, 3½ per cent.	24,000.00
15	Boston & Maine R. R., coupon bonds, 4 per cent.	15,000.00
1	City of Melrose, coupon bonds, 4 per cent...	1,000.00
1	City of New Bedford, registered bonds, 5 per cent.	28,000.00
6	City of Dover, coupon bonds, 4 per cent....	6,000.00
3	City of Boston, registered bonds, 3½ per cent.	15,000.00
15	Delaware & Hudson R. R., coupon bonds, 4 per cent.	15,000.00
6	Milwaukee & Lake Shore R. R., coupon bonds, 6 per cent.....	6,000.00
16	Am. Tel. & Tel. Co., coupon bonds, 4 per cent.	16,000.00
1	City of Lowell Serial Note, 4 per cent.....	1,199.10
5	Delaware & Hudson R. R., registered bonds, 7 per cent.....	25,000.00
20	Worcester Consolidated Street R. R., coupon bonds, 5 per cent.....	20,000.00
15	City of Chicago, coupon bonds, 4 per cent...	15,000.00
4	C. B. & Q. R. R., coupon bonds, 4 per cent...	4,000.00
7	Winona & St. Peter R. R., coupon bonds, 7 per cent.	7,000.00
1	Boston & Maine R. R., coupon bonds, 4 per cent.	1,000.00

5 N. Y., N. H. & H. R. R., coupon bonds, 4 per cent.	5,000.00
7 N. Y., N. H. & H. R. R., coupon notes, 5 per cent.	7,000.00
6 Worcester, Nashua & Rochester R. R., coupon bonds, 4 per cent.....	6,000.00
2 Boston & Lowell R. R., coupon bonds, 4 per cent.	2,000.00
4 Town of Lexington, registered bonds, 4 per cent.	4,000.00
1 Chicago & No. Western R. R., registered bonds, 4 per cent.....	5,000.00
17 City of Lowell, coupon bonds, 4 per cent....	17,000.00
13 City of Lowell, coupon bonds, 4 per cent...	13,000.00
	<hr/>
	578,199.10
Cash on deposit in Appleton Nat. Bank.....	4,155.51
	<hr/>
	\$582,354.61
	<hr/>

HIGH SERVICE WATER LOAN SINKING FUND

	Securities	Cash	Total
On hand Jan. 1, 1911.....	\$ 84,000.00	\$ 635.37	\$ 84,635.37
Received during 1911:			
Income on Investments.....		3,405.00	
Income on Bank Deposits...		61.20	
Securities matured and sold.....		82,707.16	
		<hr/>	
Cash paid City of Lowell:.....		86,808.73	
Decrease during 1911.....		86,808.73	
		<hr/>	
			\$ 84,635.37
			<hr/>

CITY HALL & MEMORIAL BUILDING SINKING FUND

	Securities	Cash	Total
On hand Jan. 1, 1911.....	\$251,300.00	\$ 822.50	\$252,122.50
Received during 1911:			
Cash—Annual Appropriation ...		7,500.00	
Income on Investments...		10,686.50	
Income on Bank Deposits		115.40	
Securities bought in 1911.....	18,000.00		
Securities matured in 1911.....		1,700.00	
	<hr/>	<hr/>	
		20,824.40	
Paid for securities in 1911.....		18,000.68	
	<hr/>	<hr/>	
On hand Jan. 1, 1912.....	267,600.00	2,823.72	270,423.72
Increase during 1911.....			18,301.22
			<hr/>

Securities belonging to this Fund:

5	City of Brockton, coupon bonds, 4 per cent..	\$ 5,000.00
1	Town of Reading, coupon bonds, 4 per cent..	1,000.00
3	Town of Wrentham, coupon bonds, 4 per cent.	3,000.00
9	Town of Arlington, coupon bonds, 4 per cent.	9,000.00
8	Town of Stoughton, coupon bonds, 4 per cent.	8,000.00
3	City of Saginaw, coupon bonds, 4 per cent..	3,000.00
6	Fitchburg R. R., coupon bonds, 4 per cent...	6,000.00
1	City of Boston, registered bond, 4 per cent..	21,000.00
1	City of Brockton, registered bond, 4 per cent.	1,000.00
10	C. B. & Q. R. R., coupon bonds, 4 per cent...	10,000.00
19	Illinois Central, coupon bonds, 4 per cent...	19,000.00
7	N. Y., Lack. & West. R. R., coupon bonds, 6 per cent.	7,000.00
7	City of Indianapolis, coupon bonds, 4 per cent.	7,000.00
1	City of Brockton, registered bond, 4 per cent.	1,000.00
2	Town of Northfield, coupon bonds, 3½ per cent.	1,000.00
11	Winona & St. Peter R. R., coupon bonds, 7 per cent.	11,000.00
6	City of Malden, coupon bonds, 4 per cent...	6,000.00
10	Lynn & Boston St. R. R., coupon bonds, 5 per cent.	10,000.00
5	N. Y., N. H. & H. R. R., coupon bonds, 4 per cent.	5,000.00
5	Illinois Central R. R., coupon bonds, 3½ per cent.	5,000.00
7	City of Portsmouth, coupon bonds, 4 per cent.	7,000.00
10	City of Augusta, coupon bonds, 4 per cent..	10,000.00
3	N. Y., N. H. & H. R. R., coupon bonds, 4 per cent.	3,000.00
1	City of Lowell, coupon bonds, 4 per cent....	1,000.00
2	C. B. & Q. R. R., coupon bonds, 4 per cent...	2,000.00
10	Fitchburg R. R., coupon bonds, 4 per cent.	10,000.00
10	Boston & Maine R. R., coupon bonds, 4 per cent.	10,000.00
4	City of Melrose, coupon bonds, 4 per cent...	4,000.00
1	City of Providence, registered bond, 4 per cent.	10,000.00
1	City of Providence, registered bond, 4 per cent.	1,000.00
1	City of Lowell, coupon bond, 4 per cent.....	1,000.00
10	Delaware & Hudson R. R., coupon bond, 4 per cent.	10,000.00
1	City of Boston, registered bond, 3½ per cent.	5,000.00
1	City of Lowell, Serial Note. 4¼ per cent....	1,600.00
1	Chicago & No. Western R. R., registered bond. 4 per cent.....	10,000.00
8	Am. Tel. & Tel. Co., coupon bonds, 4 per cent.	8,000.00

5 Worcester Consolidated, coupon bonds, 5 per cent.	5,000.00
10 Kansas City, coupon bonds, 4½ per cent....	10,000.00
2 City of Newton, coupon bonds, 4 per cent...	2,000.00
6 C. B. & Q. R. R., coupon bonds, 4 per cent...	6,000.00
5 City of Melrose, coupon bonds, 4 per cent...	5,000.00
7 City of Lowell, coupon bonds, 4 per cent....	7,000.00
	<hr/>
	267,600.00
Cash on deposit in Appleton Nat. Bank.....	2,823.72
	<hr/>
	\$270,423.72
	<hr/>

LOWELL HIGH SCHOOL SINKING FUND

	Securities	Cash	Total
On hand Jan. 1, 1911.....	\$ 82,500.00	\$ 1,467.13	\$ 83,967.13
Received during 1911:			
Cash—Annual Appropriation ...		3,000.00	
Income on Investments..		3,392.50	
Income on Bank Deposits		49.97	
Securities bought in 1911.....	7,000.00		
Securities matured in 1911.....		500.00	
		<hr/>	
		8,409.60	
Paid for securities in 1911.....		7,326.69	
		<hr/>	
On hand Jan. 1, 1912.....	\$9,000.00	1,082.91	90,082.91
Increase during 1911.....			<hr/>
			6,115.78
			<hr/>

Securities belonging to this Fund:

7 City of Portsmouth, coupon bonds, 4 per cent.	\$ 7,000.00
5 City of Indianapolis, coupon bonds, 4 per cent.	5,000.00
4 Fitchburg R. R., coupon bonds, 4 per cent...	4,000.00
5 C. B. & Q. R. R., coupon bonds, 4 per cent...	5,000.00
7 Illinois Central R. R., coupon bonds, 4 per cent.	7,000.00
2 City of Saginaw, coupon bonds, 4 per cent...	2,000.00
1 Boston & Maine R. R., coupon bonds, 4 per cent.	1,000.00
10 N. Y., N. H. & H. R. R., coupon bonds, 4 per cent.	10,000.00
1 N. Y., Lack. & W. R. R., coupon bonds, 6 per cent.	1,000.00
12 N. Y., N. H. & H. R. R., coupon bonds, 4 per cent.	12,000.00
5 C. B. & Q. R. R., coupon bonds, 4 per cent...	5,000.00
1 N. Y., N. H. & H. R. R., coupon note, 5 per cent.	1,000.00

1 City of Lowell, serial note, 4½ per cent.....	900.00
1 City of Lowell, serial note, 4½ per cent.....	2,100.00
5 City of Milwaukee, coupon bonds, 4 per cent.	5,000.00
1 Chicago & No. Western R. R., registered bond, 4 per cent.....	5,000.00
3 Am. Tel. & Tel. Co., coupon bonds, 4 per cent.	3,000.00
2 Town of Winchester, coupon bonds, 4 per cent.	2,000.00
3 West End St. R. R., coupon bonds, 4½ per cent.	3,000.00
1 City of Lowell, coupon bonds, 4 per cent....	1,000.00
2 City of Haverhill, coupon bonds, 4 per cent.	2,000.00
2 N. Y., Lack. & West. R. R., coupon bonds, 6 per cent.	2,000.00
3 City of Lowell, coupon bonds, 4 per cent....	3,000.00
	<hr/>
	89,000.00
Cash on deposit in Appleton Nat. Bank.....	1,082.91
	<hr/>
	\$ 90,082.91

NEW SCHOOL HOUSES SINKING FUND

	Securities	Cash	Total
On hand Jan. 1, 1911.....	\$ 68,000.00	\$ 727.28	\$ 68,727.28
Received during 1911:			
Cash—Annual Appropriation ...		4,000.00	
Income on Investments ..		2,760.00	
Income on Bank Deposits		38.14	
Securities bought in 1911.....	6,000.00		
	<hr/>	<hr/>	
Paid for securities in 1911.....		7,525.42	
	<hr/>	<hr/>	
On hand Jan. 1, 1912.....	74,000.00	1,525.17	75,525.17
Increase during 1911.....			6,797.89
			<hr/>
Securities belonging to this Fund:			
8 City of Indianapolis, coupon bonds, 4 per cent.		8,000.00	
3 C. B. & Q. R. R., coupon bonds, 4 per cent...		3,000.00	
5 Illinois Central R. R., coupon bonds, 4 per cent.		5,000.00	
2 Winona & St. Peter R. R., coupon bonds, 7 per cent.		2,000.00	
1 N. Y., Lack. & West. R. R., coupon bonds, 6 per cent.....		1,000.00	
4 Boston & Maine R. R., coupon bonds, 4 per cent.		4,000.00	
5 N. Y., N. H. & H. R. R., coupon bonds, 4 per cent.		5,000.00	

1 City of Minneapolis, registered bond, 3½ per cent.	10,000.00	
1 City of Lowell, coupon bonds, 4 per cent....	1,000.00	
4 C. B. & Q. R. R., coupon bonds, 4 per cent...	4,000.00	
1 N. Y., N. H. & H. R. R., coupon note, 5 per cent.	1,000.00	
5 City of Melrose, coupon bonds, 4 per cent...	5,000.00	
5 City of Milwaukee, coupon bonds, 4 per cent.	5,000.00	
1 Chicago & No. West. R. R., registered bond, 4 per cent.....	5,000.00	
3 Am. Tel. & Tel., coupon bonds, 4 per cent...	3,000.00	
6 Town of Watertown, coupon bonds, 4 per cent.	6,000.00	
1 City of Portsmouth, coupon bonds, 4 per cent.	1,000.00	
2 City of Everett, coupon bonds, 4 per cent...	2,000.00	
3 City of Lowell, coupon bonds, 4 per cent....	3,000.00	
	<u>74,000.00</u>	
Cash on deposit in Appleton Nat. Bank.....	1,525.17	
	<u>\$ 75,525.17</u>	

HAPGOOD WRIGHT CENTENNIAL TRUST FUND

On hand Jan. 1, 1911.....	\$4,126.99	
Received during 1911:		
Cash—Interest on bank deposits.....	166.70	4,293.69
	<u>166.70</u>	<u>4,293.69</u>
On hand Jan. 1, 1912.....		4,293.69
		<u>166.70</u>
Increase during 1911.....		166.70
Securities belonging to this Fund:		
Cash deposited in Lowell Inst. for Savings...	\$ 862.04	
Cash deposited in City Inst. for Savings.....	3,431.65	
	<u>4,293.69</u>	\$ 4,293.69

Respectfully submitted,

A. K. CHADWICK,
C. L. KNAPP,
A. E. JEAN,

Commissioners of Sinking Funds for the City of Lowell
for the year 1911.

TEMPORARY LOANS

The following table shows the Receipts and Payments and Balances by years of this account:

Year	Bal. F'w'd	Borrowed	Paid
1896		600,000.00	425,000.00
1897	175,000.00	1,000,000.00	925,000.00
1898	250,000.00	1,250,000.00	1,075,000.00
1899	425,000.00	1,000,000.00	1,025,000.00
1900	400,000.00	1,000,000.00	925,000.00
1901	475,000.00	925,000.00	900,000.00
1902	500,000.00	1,100,000.00	1,000,000.00
1903	600,000.00	1,200,000.00	1,100,000.00
1904	700,000.00	1,300,000.00	1,200,000.00
1905	800,000.00	1,300,000.00	1,300,000.00
1906	800,000.00	1,300,000.00	1,300,000.00
1907	800,000.00	1,300,000.00	1,300,000.00
1908	800,000.00	1,300,000.00	1,300,000.00
1909	800,000.00	1,200,000.00	1,300,000.00
1910	700,000.00	1,300,000.00	1,300,000.00
1911	700,000.00	1,200,000.00	1,200,000.00
1912	700,000.00		

*** OVERLAYS****DISTANCE FROM DEBT LIMIT**

		1900	\$183,054.94
		1901	237,456.18
1902	\$10,326.29	1902	332,447.53
1903	58,171.02	1903	244,270.59
1904	22,663.80	* 1904	272,658.40
1905	24,541.18	1905	178,409.13
1906	34,611.43	1906	235,730.50
1907	2,862.31	1907	172,875.58
1908	10,872.31	1908	213,708.79
1909	4,859.11	1909	360,771.61
1910	11,268.54	1910	494,206.07
1911	4,572.55	1911	487,089.15

PAYMENTS TO BE MADE TO SINKING FUNDS IN 1912.

City Hall and Memorial Buildings, due 1920	\$ 7,500.00	\$ 450,000.00
High School, due 1921.....	3,000.00	150,000.00
New School Houses, due 1926.....	4,000.00	200,000.00
Water Loans, due 1920.....	16,000.00	1,000,000.00
	<hr/>	<hr/>
	\$30,500.00	\$1,800,000.00

PROPERTY EXEMPT FROM TAXATION

	Personal Valuation	Real Estate Valuation	Totals
Literary Institutions.....	\$140,846.90	\$ 466,895.00	\$ 607,741.90
Temperance Institutions ..	3,365.85	16,350.00	19,715.85
Benevolent Institutions....	35,423.62	97,750.00	133,173.62
Charitable Institutions ...	873,222.77	487,440.00	1,360,662.77
Scientific Institutions	406,420.29	486,650.00	893,070.29
Houses of Religious Wor- ship		2,322,750.00	2,322,750.00
	<hr/>	<hr/>	<hr/>
	\$1,459,279.43	\$3,877,835.00	\$5,337,114.43

The total real estate area exempt, 115,806.1000 acres.

CITY OF LOWELL

SEWER ASSESSMENTS

SHOWING COMPARATIVE COST TO CITY AND ABUTTORS.

Assessment Year	Cost	Net Assessment	Abatements and Allowances	City	Manholes	Cost to City
1907	\$ 17,396.07	\$ 5,073.91	\$ 250.67	\$ 10,974.22	\$1,097.27	\$ 12,322.16
1908	71,675.39	13,638.57	226.05	55,157.31	2,653.46	58,036.82
1909	87,025.73	12,612.92	440.07	71,926.07	2,046.67	74,412.81
1910	40,187.97	11,530.03	367.00	26,103.67	2,187.27	28,657.94
1911 (Part)	9,590.02	2,489.26	119.94	6,381.82	599.00	7,100.76
Total	\$225,875.18	\$45,344.69	\$1,403.73	\$170,543.09	\$8,583.67	\$180,530.49

VALUATION OF REAL ESTATE AND PERSONAL

PROPERTY WITH TAX RATE

Year	Polls	Personal	Real Estate	Total	Rate	Non-Resident Bank Stock	Grand Total Tax
1890	20,021	\$17,037,462	\$45,316,150	\$62,353,612	\$17.00	\$17,096.24	\$1,117,188.21
1891	20,931	17,535,390	46,552,885	64,088,275	15.60	15,956.07	1,057,638.66
1892	22,689	17,213,834	47,503,470	64,717,304	16.80	17,616.16	1,150,506.87
1893	23,511	18,004,970	50,851,600	68,856,570	16.40	17,397.53	1,193,667.27
1894	23,304	17,046,966	52,044,570	69,091,536	17.40	16,786.71	1,265,587.45
1895	23,735	16,526,492	52,359,240	68,885,732	18.00	17,557.16	1,304,970.34
1896	25,320	15,967,762	53,942,710	69,910,472	15.00	14,941.02	1,114,238.10
1897	25,140	15,709,260	54,680,020	70,389,280	17.40	17,302.47	1,292,355.95
1898	24,526	15,350,323	55,626,980	70,977,303	18.00	17,161.06	1,343,804.51
1899	24,882	15,374,232	55,881,355	71,255,587	19.60	18,366.73	1,469,642.32
1900	25,837	15,497,630	56,031,885	71,529,515	18.80	17,330.59	1,413,759.47
1901	25,059	15,425,843	56,248,745	71,674,588	18.60	16,449.04	1,399,714.38
1902	25,263	15,194,442	56,709,315	71,903,757	19.60	10,974.00	1,470,813.64
1903	24,559	15,178,418	56,825,610	72,004,028	20.40	12,054.30	1,530,054.47
1904	25,555	14,841,767	56,773,140	71,614,907	20.00	11,239.36	1,494,647.50
1905	26,087	14,433,923	57,211,795	71,645,718	20.20	12,522.12	1,511,939.62
1906	25,688	15,392,795	58,932,980	74,325,775	19.60	12,149.35	1,520,310.55
1907	25,181	16,763,821	59,690,910	75,454,738	19.40	12,125.23	1,526,309.15
1908	25,118	17,268,891	60,590,000	77,858,891	20.40	10,196.39	1,648,753.78
1909	26,460	17,880,477	61,296,360	79,695,960	19.60	10,174.81	1,614,960.82
1910	27,196	17,927,358	62,167,445	80,094,803	19.60	10,749.45	1,634,999.61
1911	26,426	18,564,888	63,601,855	82,166,743	18.90	11,456.37	1,617,259.82

Loans Negotiated by the City since 1900, how expended

Year	For Waterways	For Current Expenses	For Permanent Improvement	Total Loans
1900	\$ 75,000.00		\$213,500.00	\$288,500.00
1901		40,000.00	216,100.00	256,100.00
1902		26,500.00	196,385.00	222,885.00
1903		43,860.00	343,460.00	387,320.00
1904		113,716.00	140,698.00	254,414.00
1905		165,500.00	194,650.00	360,150.00
1906	27,000.00	94,100.00	126,360.00	247,460.00
1907		136,160.00	239,340.00	365,500.00
1908		131,413.00	173,000.00	304,413.00
1909			172,900.00	172,900.00
1910	60,000.00		181,000.00	241,000.00
1911	100,000.00	62,000.00	250,450.00	412,450.00

Expenditure, Tax Rate, Valuation from 1860

Year	Expenditures	Tax Rate	Total City Valuation
1860	\$ 267,192.07	\$ 8.40	\$22,155,176.00
1865	756,342.81	14.60	21,076,360.00
1870	778,636.03	13.90	25,972,488.00
1875	1,162,922.95	16.20	38,690,495.00
1880	1,398,683.48	16.20	41,102,016.00
1885	1,833,483.69	16.00	51,351,780.00
1890	3,613,584.04	17.00	62,353,612.00
1895	2,903,410.60	18.00	68,885,732.00
1900	3,353,844.41	18.80	71,529,515.00
1905	3,738,502.84	20.20	71,645,718.00
1906	3,795,000.75	19.60	74,945,640.00
1907	3,718,874.34	19.40	76,079,750.00
1908	4,046,987.96	20.40	77,858,891.85
1909	3,791,607.95	19.60	79,695,960.00
1910	3,887,399.24	19.60	80,392,890.00
1911	\$4,073,195.26	\$18.90	\$82,772,900.00

Thomas Nesmith Fund

\$25,000.00. Annual interest, \$1,500.00

Resolution, numbered 57, passed by the City Council, November, 1870; "That the sum of \$25,000.00 be accepted by the City and that the interest, at the rate of 6 per cent., be paid to the trustees, and that they in turn pay to the Ministry-at-Large, or to like people, as they may decide. Said sum to be used for people in temporary need of charitable assistance without distinction of race, color or religion. Original trustees: George F. Richardson, John A. Buttrick, Owen Street, Samuel W. Stickney and Charles Hovey. In case of a vacancy, the remaining trustees shall report to the Justice of the Court, who shall appoint a successor to fill said vacancy."

Carney Medal Fund

Received of James G. Carney, in 1858 and 1859, the amount of \$200, which is to remain a perpetual debt of the city forever; the interest to be applied in payment for the "Carney Medals" to the departments of the High School (annually).

Balance Jan. 1, 1910.....	\$200.00	
Balance undrawn Dec. 31, 1910.....		\$200.00
		<u>\$200.00</u>

For the information of the citizens of Lowell the Auditor respectfully refers them to the "Annual Report of the School Committee," for the year 1859, where all the correspondence between the donor and the recipient may be found.

Thomas Nesmith Fund

\$1,000.00. Annual interest, \$60.00.

Resolution, numbered 54, passed by the City Council, April, 1870: "That the City of Lowell be appointed trustee of the sum of \$1,000.00, and the City Treasurer is authorized to pay to the High Street Church the interest of said sum at the rate of 6 per cent. for ever. Said sum to be used by the Pastor and Deacons of said Church to sustain the Sunday School and its library for the moral and religious instruction of the children."

Jonathan Tyler Fund

\$10,000.00. Annual interest, \$600.00

Resolutions, numbered 14 and 74, passed by the City Council, May, 1878: "That the City of Lowell be appointed trustee of the sum of \$10,000.00 and that the City Treasurer is authorized to pay to the Ministry-at-Large the interest of said sum at the rate of 6 per cent. forever. Said sum to be used for the benefit of the worthy poor of the city. Said Ministry shall make an annual report of their dispensing said money to the City Council."

Name	Amount	Receipts	Payments
Thomas Nesmith	\$25,000.00	*	\$1,500.00
Thomas Nesmith	1,000.00	*	60.00
Jonathan Tyler	10,000.00	*	600.00
Hapgood Wright	1,000.00	†166.70	166.70
Cemetery Fund	60,550.00	‡2,751.57	2,540.21

* No interest received by City, but City pays 6 per cent. per resolution.

† Interest received by City and deposited in bank, per resolution.

‡ Interest received by City and paid to Cemetery Trustees at 4 per cent. per resolution.

No. 49

Order Appropriating Fifty-Four Thousand Dollars (\$54,000.00)

Ordered—That the sum of Fifty-Four Thousand Dollars (\$54,000.00) be and the same is hereby appropriated from the General Treasury Fund and placed to the credit of an appropriation to be called "Building Appropriation," said sum to remain intact until final action upon the question of the building of a public hall is taken by the City Council.

Adopted June 13, 1905, and approved June 19, 1905.

INSURANCE ON CITY PROPERTIES**City Hall**

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
May 1, 1909	May 1, 1912	Bldgs. & Fix.		\$ 5,000	\$ 36.00
May 1, 1909	May 1, 1912	"	"	5,000	36.00
May 14, 1909	May 14, 1912	"	"	15,000	108.00
Dec. 24, 1909	Dec. 24, 1912	"	"	5,000	36.00
Dec. 24, 1909	Dec. 24, 1912	"	"	5,000	36.00
Dec. 24, 1909	Dec. 24, 1912	"	"	5,000	36.00
Jan. 12, 1910	Jan. 12, 1913	"	"	5,000	44.40
Jan. 12, 1910	Jan. 12, 1913	"	"	5,000	44.40
Jan. 12, 1910	Jan. 12, 1913	"	"	5,000	44.40
Jan. 12, 1910	Jan. 12, 1913	"	"	5,000	44.40
Jan. 19, 1910	Jan. 19, 1913	"	"	5,000	36.00
Jan. 19, 1910	Jan. 19, 1913	"	"	5,000	36.00
Jan. 19, 1910	Jan. 19, 1913	"	"	5,000	36.00
Jan. 19, 1910	Jan. 19, 1913	"	"	5,000	36.00
Mar. 3, 1911	Mar. 3, 1914	"	"	15,000	108.00
Mar. 15, 1911	Mar. 15, 1914	"	"	10,000	72.00
Mar. 24, 1911	Mar. 24, 1914	"	"	5,000	36.00
Apr. 1, 1911	Apr. 1, 1914	"	"	5,000	36.00
Apr. 1, 1911	Apr. 1, 1914	"	"	5,000	36.00
Mar. 20, 1912	Mar. 20, 1915	"	"	5,000	36.00
Mar. 20, 1912	Mar. 20, 1915	"	"	10,000	72.00
Apr. 12, 1912	Apr. 12, 1915	"	"	5,000	36.00

\$140,000

Buildings and Fixtures..... \$132,000

Furniture 8,000

Total on Bldgs. & Fix..... 155,000

Memorial Building

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
May 1, 1909	May 1, 1912	Bldgs. & Fix.		\$5,000	\$ 47.00
May 1, 1909	May 1, 1912	"	"	5,000	47.00
Dec. 1, 1909	Dec. 1, 1912	"	"	5,000	47.00
Dec. 1, 1909	Dec. 1, 1912	"	"	2,500	23.50

AUDITOR'S REPORT

193

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Dec. 1, 1909	Dec. 1, 1912	"	"	2,500	23.50
Jan. 12, 1911	Jan. 12, 1913	"	"	5,000	47.00
Jan. 12, 1911	Jan. 12, 1913	"	"	5,000	47.00
Jan. 19, 1911	Jan. 19, 1913	"	"	2,500	23.50
Jan. 19, 1911	Jan. 19, 1913	"	"	2,500	23.50
Mar. 1, 1911	Mar. 1, 1914	"	"	5,000	75.00
Mar. 1, 1911	Mar. 1, 1914	"	"	5,000	75.00
Mar. 13, 1911	Mar. 13, 1914	"	"	5,000	47.00
Mar. 13, 1911	Mar. 13, 1914	"	"	2,500	23.50
Mar. 13, 1911	Mar. 13, 1914	"	"	2,500	23.50
Mar. 15, 1911	Mar. 15, 1914	"	"	5,000	47.00
Mar. 16, 1911	Mar. 16, 1914	"	"	5,000	47.00
Mar. 16, 1911	Mar. 16, 1914	"	"	5,000	47.00
Mar. 16, 1911	Mar. 16, 1914	"	"	5,000	47.00
Mar. 16, 1911	Mar. 16, 1914	"	"	7,500	70.50
Mar. 16, 1911	Mar. 16, 1914	"	"	2,500	23.50
Mar. 22, 1911	Mar. 22, 1914	"	"	5,000	47.00
Mar. 20, 1912	Mar. 20, 1915	"	"	12,000	112.80
Mar. 20, 1912	Mar. 20, 1915	"	"	8,000	75.20
Apr. 12, 1912	Apr. 12, 1915	"	"	2,500	23.50
Apr. 12, 1912	Apr. 12, 1915	"	"	2,500	23.50
				<hr/>	
				\$115,000	
Total Insurance				\$132,000	

City Hall and Memorial Building

Date of Issue	Expiration	Prop. Ins. Both Buildings	Amt.	Premiums
Jan. 1, 1910	Jan. 1, 1913	(7,500-3,750)	\$11,250	\$ 89.25
Jan. 1, 1910	Jan. 1, 1913	(7,500-3,750)	11,250	89.25
Jan. 12, 1910	Jan. 12, 1913	(3,000-2,000)	5,000	44.40
Jan. 19, 1910	Jan. 19, 1913	(5,000-2,500)	7,500	59.50
Jan. 19, 1910	Jan. 19, 1913	(5,000-5,000)	10,000	83.00
			<hr/>	
			\$45,000	

City Library and Memorial Hall

Date of Issue	Expiration	Prop. Ins.	Amt.	Premiums
Mar. 1, 1909	Mar. 1, 1914	Contents	\$ 2,500	\$ 37.50
Mar. 1, 1909	Mar. 1, 1914	"	2,500	37.50
Mar. 1, 1909	Mar. 1, 1914	"	2,000	30.00
Mar. 1, 1909	Mar. 1, 1914	"	4,000	60.00
Mar. 1, 1909	Mar. 1, 1914	"	2,000	30.00
Mar. 1, 1909	Mar. 1, 1914	"	1,500	22.50
Mar. 1, 1909	Mar. 1, 1914	"	1,500	22.50
Mar. 1, 1909	Mar. 1, 1914	"	1,500	22.50
Mar. 1, 1909	Mar. 1, 1914	"	1,500	22.50
Mar. 1, 1909	Mar. 1, 1914	"	1,500	22.50
Mar. 1, 1909	Mar. 1, 1914	"	3,000	45.00
Mar. 1, 1909	Mar. 1, 1914	"	1,500	22.50
Mar. 15, 1909	Mar. 15, 1914	"	2,500	37.50
Mar. 15, 1909	Mar. 15, 1914	"	2,500	37.50

Portraits

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Mar. 29, 1908	Mar. 29, 1913	6 Portraits		\$ 2,500	\$ 37.50
Mar. 29, 1908	Mar. 29, 1913	"		1,500	22.50
Mar. 29, 1908	Mar. 29, 1913	"		1,500	22.50
Mar. 29, 1908	Mar. 29, 1913	"		2,500	37.50
Apr. 7, 1908	Apr. 7, 1913	J. B. F. Portraits		1,000	12.00
May 1, 1909	May 1, 1913	"	"	1,000	12.00
Nov. 15, 1911	Nov. 15, 1912	"	"	1,000	2.50
				<hr/>	
				\$11,000	

City Hall Elevator

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Oct. 17, 1911	Oct. 17, 1912	Liability		\$10,000	\$ 35.00

Boiler Insurance

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Apr. 10, 1912	Apr. 10, 1915	Greenhalge Sc.	Liab.	\$10,000	\$ 40.00
May 21, 1909	May 21, 1912	City Hospital	"	10,000	50.00
Aug. 1, 1909	Aug. 1, 1912	Stone crusher	"	5,000	40.00
Dec. 10, 1910	Dec. 10, 1913	School boilers	"	200,000	775.00
Jan. 14, 1911	Jan. 14, 1914	City Hall	"	25,000	70.00
Dec. 11, 1912	Dec. 11, 1913	Ash lift	"	10,000	60.98
				<hr/>	
				\$260,000	

Police Patrol

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Jan. 6, 1912	Jan. 6, 1913	Auto patrol		\$ 4,000	\$ 90.00

Pauper Department

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
July 7, 1907	July 12, 1912	Barns & storage		\$ 1,000	\$ 30.00
Oct. 1, 1907	Oct. 1, 1912	Carriage shed		1,000	30.00
Oct. 1, 1907	Oct. 1, 1912	Vech. & live stock		2,000	75.00
Oct. 1, 1907	Oct. 1, 1912	Vech. & live stock		2,000	75.00
Nov. 1, 1907	Nov. 1, 1912	City farm & cont.		2,500	78.75
Nov. 1, 1907	Nov. 1, 1912	City farm repair shop		1,000	30.00
Nov. 1, 1907	Nov. 1, 1912	Barns & Fixtures		1,000	30.00
Nov. 1, 1907	Nov. 1, 1912	Bldgs. & Fix.		3,000	90.00
Nov. 1, 1907	Nov. 1, 1912	"	"	3,000	90.00
Nov. 1, 1907	Nov. 1, 1912	"	"	2,500	30.62
Nov. 1, 1907	Nov. 1, 1912	"	"	1,000	33.75
Nov. 15, 1907	Nov. 15, 1912	Buildings		2,000	60.00
Apr. 1, 1908	Apr. 1, 1913	"		1,250	37.50
Apr. 1, 1908	Apr. 1, 1913	"		2,500	75.00
Apr. 1, 1908	Apr. 1, 1913	Bldgs. & Fix.		2,500	75.00
Apr. 1, 1908	Apr. 1, 1913	"	"	2,500	75.00
Apr. 1, 1908	Apr. 1, 1913	"	"	2,500	75.00
July 1, 1908	July 1, 1913	Buildings		2,500	80.62
Oct. 16, 1909	Oct. 16, 1912	Bldgs. (Div. \$23.86)		1,500	35.47
Oct. 16, 1909	Oct. 16, 1912	Bldgs. & Fix.		1,000	25.80
Oct. 26, 1909	Oct. 26, 1912	Bldgs. & cont.		2,500	53.75

AUDITOR'S REPORT

195

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Oct. 28, 1909	Oct. 28, 1912	"	"	1,250	32.25
Oct. 28, 1909	Oct. 28, 1912	"	"	1,250	32.25
Nov. 1, 1909	Nov. 1, 1912	Bldgs.	(Div. \$25.80)	2,500	64.50

 \$45,750
Health Department

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
July 3, 1911	July 3, 1912	Horses, veh, etc.		\$ 2,000	\$ 25.00
Jan. 19, 1912	Jan. 19, 1912	Horses, stable cont.		2,000	25.00

Park Department

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
May 9, 1911	May 9, 1912	Stable cont.		\$ 1,500	\$ 21.60
May 9, 1911	May 9, 1912	Stable cont.		1,500	21.60
Feb. 1, 1912	Feb. 1, 1913	Stable, Lennox St.		2,000	28.80
Feb. 1, 1912	Feb. 1, 1913	Stable, Lennox St.		2,000	28.80

 \$ 7,000
Rifle Range

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Feb. 16, 1912	Feb. 16, 1915	Building		\$ 1,000	\$ 31.00
Feb. 16, 1912	Feb. 16, 1915	"		1,000	31.00
Feb. 16, 1912	Feb. 16, 1915	"		1,000	31.00

 \$ 3,000
Street Department

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Feb. 1, 1912	Feb. 1, 1913	Stable & Blk. shop		\$ 5,000	\$ 68.80
Feb. 1, 1912	Feb. 1, 1913	Stables & Addl.		5,000	67.50
Feb. 23, 1912	Feb. 23, 1913	Horses & Wagons		1,500	18.75
Feb. 23, 1912	Feb. 23, 1913	Hardware & Tools		3,000	37.50
Feb. 23, 1912	Feb. 23, 1913	Horses		1,500	18.75
Feb. 23, 1912	Feb. 23, 1913	Hardware & Tools		1,500	18.75
Feb. 23, 1912	Feb. 23, 1913	Horses & Vehicles		1,000	12.50
Feb. 23, 1912	Feb. 23, 1913	"	"	1,500	18.75

 \$ 20,000
High School

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Feb. 16, 1911	Feb. 16, 1914	Building		\$ 10,000	\$ 80.00
Feb. 16, 1911	Feb. 16, 1914	"		5,000	40.00
Feb. 16, 1911	Feb. 16, 1914	"		5,000	40.00
Feb. 16, 1911	Feb. 16, 1914	Bldg. & Contents		5,500	44.00
Feb. 16, 1911	Feb. 16, 1914	Bldg. & Contents		5,500	44.00
Feb. 16, 1911	Feb. 16, 1914	Building		5,000	40.00
Feb. 16, 1911	Feb. 16, 1914	"		5,000	40.00
Feb. 16, 1911	Feb. 16, 1914	"		10,000	80.00
Feb. 16, 1911	Feb. 16, 1914	"		5,000	40.00
Feb. 9, 1911	Feb. 19, 1914	"		10,000	80.00
Feb. 16, 1911	Feb. 16, 1914	"		5,000	40.00

AUDITOR'S REPORT

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Mar. 5, 1911	Mar. 5, 1914	„		2,500	20.00
Mar. 5, 1911	Mar. 5, 1914	„		2,500	20.00
Mar. 5, 1911	Mar. 5, 1914	„		2,500	20.00
Mar. 5, 1911	Mar. 5, 1914	„		5,000	40.00
Mar. 5, 1911	Mar. 5, 1914	„		5,000	40.00
Mar. 5, 1911	Mar. 5, 1914	„		5,000	40.00
Mar. 5, 1911	Mar. 5, 1914	„		7,500	60.00
Mar. 9, 1911	Mar. 9, 1914	„		5,000	40.00
Mar. 9, 1911	Mar. 9, 1914	„		5,000	40.00
Feb. 13, 1912	Feb. 13, 1915	„		10,000	80.00
Feb. 16, 1912	Feb. 16, 1915	„		5,000	40.00
Feb. 16, 1912	Feb. 16, 1915	„		5,000	40.00
Feb. 17, 1912	Feb. 17, 1915	„		10,000	80.00
				<hr/>	
				\$141,000	

High School Annex

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Feb. 9, 1911	Feb. 9, 1914	Annex & Contents		\$ 5,630	\$ 67.56
Feb. 16, 1911	Feb. 16, 1914	„	„	2,815	33.78
Feb. 16, 1911	Feb. 16, 1914	„	„	5,945	71.34
Feb. 16, 1911	Feb. 16, 1914	„	„	2,500	30.00
Feb. 16, 1911	Feb. 16, 1914	„	„	5,630	67.56
Feb. 16, 1911	Feb. 16, 1914	„	„	2,815	33.78
Feb. 16, 1911	Feb. 16, 1914	„	„	2,815	33.78
Mar. 5, 1911	Mar. 5, 1914	„	„	5,630	67.56
Mar. 5, 1911	Mar. 5, 1914	„	„	2,500	30.00
Mar. 5, 1911	Mar. 5, 1914	„	„	2,500	30.00
Mar. 5, 1911	Mar. 5, 1914	Building		2,500	20.00
Mar. 5, 1911	Mar. 5, 1914	Annex		2,500	30.00
Feb. 16, 1911	Feb. 16, 1914	Annex & Equipment		5,630	67.56
Feb. 16, 1912	Feb. 16, 1913	Annex & contents		2,815	16.89
Feb. 16, 1912	Feb. 16, 1915	„	„	5,630	67.56
Feb. 16, 1912	Feb. 16, 1913	„	„	5,630	33.78
Feb. 16, 1912	Feb. 16, 1913	„	„	2,815	16.89
Mar. 5, 1912	Mar. 5, 1915	Furniture & Fix.		1,260	15.12
Mar. 9, 1912	Mar. 9, 1915	Annex & Contents		2,815	33.78
Mar. 9, 1912	Mar. 9, 1915	„	„	2,815	33.78
				<hr/>	
				\$ 73,190	

SCHOOL HOUSES

Wigginville School

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Mar. 9, 1909	Mar. 9, 1914	Building & Contents		\$ 2,500	\$ 37.50
Mar. 9, 1909	Mar. 9, 1914	„	„	2,500	37.50
Mar. 9, 1909	Mar. 9, 1914	„	„	2,000	30.00
Mar. 9, 1909	Mar. 9, 1914	„	„	2,500	37.50
Mar. 9, 1909	Mar. 9, 1914	„	„	2,500	37.50
Mar. 9, 1909	Mar. 9, 1914	„	„	2,000	30.00
				<hr/>	
				\$ 14,000	

Charles Street School

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Mar. 13, 1911	Mar. 13, 1914	Old Train. School		\$ 12,000	\$144.00
Mar. 13, 1911	Mar. 13, 1914	"	"	3,000	36.40
				<hr/>	
				\$ 15,000	

Old Moody School

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
July 14, 1911	July 14, 1912	School building		\$ 2,500	\$ 10.50
July 14, 1911	July 14, 1912	"	"	2,500	10.50
				<hr/>	
				\$ 5,000	

Washington School

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Jan. 23, 1911	Jan. 23, 1914	Building		\$ 5,000	\$ 47.00
Jan. 28, 1911	Jan. 28, 1914	"		7,500	70.50
Jan. 28, 1911	Jan. 28, 1914	"		10,000	94.00
Jan. 28, 1911	Jan. 28, 1914	"		2,500	23.50
Jan. 28, 1911	Jan. 28, 1914	"		5,000	47.00
Jan. 28, 1911	Jan. 28, 1914	"		5,000	47.00
Feb. 19, 1911	Feb. 19, 1914	"		5,000	47.00
June 14, 1911	June 14, 1912	"		5,000	23.50
				<hr/>	
				\$ 45,000	

Greenhalge School

Date of Issue	Expiration	Prop.	Ins.	Amt.	Premiums
Feb. 15, 1911	Feb. 15, 1914	Building		\$ 5,000	\$ 47.00
Feb. 15, 1911	Feb. 15, 1914	"		2,500	23.50
Feb. 15, 1911	Feb. 15, 1914	"		2,500	23.50
Apr. 1, 1911	Apr. 1, 1914	"		5,000	47.00
June 14, 1911	June 14, 1912	"		5,000	23.50
Apr. 1, 1912	Apr. 1, 1913	"		5,000	23.50
Apr. 1, 1912	Apr. 1, 1913	"		5,000	23.50
Apr. 1, 1912	Apr. 1, 1913	"		5,000	23.50
				<hr/>	
				\$ 35,000	

PROPERTY VALUATION AND TAX

Personal Valuation at time of commitment ...	\$17,987,813.15	@ \$18.90	\$ 339,969.67
Supplementary Personal Valuation in December	<u>577,075.00</u>	"	<u>10,906.72</u>
Total Personal Valuation in 1911	\$18,564,888.15	"	\$ 350,876.39
Total Real Estate Valuation In 1911	<u>\$63,601,855.00</u>	"	<u>\$1,202,075.06</u>

Total City Valuation & Tax on same	\$82,166,743.15	,	\$1,552,951.45	<u>\$1,552,951.45</u>
Total City Tax Levy for year 1911				\$1,605,803.45
Non - resident Bank Shares valuation	<u>606,156.85</u>	,	<u>11,456.37</u>	<u>11,456.37</u>
Grand Total Valuation and Tax on same.	<u>\$82,772,900.00</u>	,	<u>\$1,564,407.82</u>	
Grand Total Tax Levy.....				<u>\$1,617,259.82</u>

APPROPRIATIONS

City Appropriations	\$1,383,000.00
Lowell Textile School Appropriation.....	8,000.00
State Tax	120,725.00
State Highway Tax.....	115.00
County Tax	<u>77,079.42</u>
Tax up to Overlayings.....	\$1,588,919.42
Overlayings	4,572.55
Supplementary Taxes	<u>12,311.48</u>
Total City Tax for 1911.....	\$1,605,803.45
Non-resident Bank Tax.....	<u>11,456.37</u>
Grand Total of the Taxes of the year 1911.....	<u>\$1,617,259.82</u>
Total number of polls 26426 @ \$2.00.....	\$ 52,852.00

The following figures pertain to city valuations and abatements as applied to **Limit of Appropriations** and **Limit of Municipal Debt**.

Year	Total City Valuations	Net Property Tax Abatements	Rate	Amt. of Abatements in terms of valuation	Net Valuations Abatem'ts ded'ted
1911	\$82,166,743.15	\$ 6,516.05	\$18.90	\$ 344,764.55	\$81,821,978.60
1910	80,094,803.85	6,880.58	79.60	351,050.00	79,743,753.85
1909	79,176,837.18	10,638.41	19.60	542,776.02	78,634,061.16
	1,238,590.57	Abatement valuations for 3 years.			
	<u>\$241,438,384.18</u>	<u>\$24,035.04</u>		\$1,238,590.57	\$240,199,793.61

3) \$240,199,793.57 Valuation for 3 years minus abatements.
\$ 80,066,597.87 Average valuation for 3 years on which **limit of municipal debt** is reckoned at 2½ per cent.

The limit of appropriations for the current expenses for the year 1912 is also reckoned by the same figures at the rate of \$12.00 per \$10,000.00 of valuation.

\$80,066,597.87	Average valuation for 3 years (abatements
2.5 p. c.	deducted).
40033298935	
16013319574	
\$20,001,664.95	Limit of Municipal Debt.
\$80066597.87	
12.00	
<hr/>	
\$960,799.17	Limit of Appropriations for 1912.

SUMMARY OF ABATEMENT OF TAXES

IN THE YEAR 1911

Year	Gross Abatements	Polls	Property	Reassessments	Net Abatements on Property	Reassessments Deducted After Payment	Net Totals Reassessments Deducted Before Payment	Net Abatement on Polls & Prop. Reass. Deducted
1906	\$ 10.78	\$ 2.00	\$ 10.78	\$ 10.78			\$ 2.00	\$ 2.00
1908	2.00	46.00	648.27	61.74	586.53	\$ 48.02	584.51	632.53
1909	694.27	534.00	2,513.79	306.74	2,207.05	66.64	2,674.41	2,741.05
1910	3,047.79	14.00	12,602.78	6,086.73	6,516.05	14.17	6,515.88	6,530.05
1911	12,616.78							
Totals	\$16,371.62	\$596.00	\$15,775.62	\$6,465.99	\$9,309.63	\$128.83	\$9,776.80	\$9,905.63

EXCISE TAX

Special case assessed in the year 1911 by the Board of Assessors of the City of Lowell under Chapter 490, Part 3, Section 48, of the Acts of 1909..... \$6,467.20

STREET WATERING ASSESSMENTS, ABATEMENTS, ETC.

Total amount of Street Watering Assessments for the year 1911.....\$19,037.65

Abatements of Street Watering Made in the Year 1911

Year	Gross Abatements	After Payment	Before Payment	Reassessments	Net Abatements
1910	\$ 2.76	\$ 2.76	\$ 2.76		
1911	85.13	3.91	81.22	68.42	16.71
Totals	\$87.89	\$3.91	\$83.98	\$71.18	\$16.71

MOTH ASSESSMENTS, ABATEMENTS, ETC.

Total amount of Moth Assessments for the year 1911..... \$3,982.15

Abatements of Moth Assessments Made in the Year 1911

Year	Gross Abatements	After Payment	Before Payment	Reassessments	Net Abatements
1909	\$ 1.00		\$ 1.00		\$ 1.00
1911	67.80		67.80	49.65	18.15
Totals	\$68.80		\$68.80	\$49.65	\$19.15

TAX WARRANTS

Warrants for the assessment of taxes in the City of Lowell for the financial year beginning January 1st, 1911, were received by the Board of Assessors as follows:—

A State Warrant for the proportion due from the City of Lowell of a State Tax of \$5,500,000.00 in accordance with the provisions of Chap. 752 of the Acts of the year 1911.....	\$ 120,725.00
A State Warrant for a Tax to be paid to the Commonwealth known as a State Highway Tax.....	115.00
A County Warrant for the proportion due from the City of Lowell of a County Tax of \$606,311.25 in accordance with a Resolve of the General Court of the year 1911	77,079.42
A City Warrant for the Tax of the City of Lowell for City Purposes as per order of the City Council, Approved March 6th, 1911.....	1,383,000.00
A City Warrant for a Tax of the City of Lowell, it being the amount of an Appropriation for the Lowell Textile School authorized by Resolve of the Legislature approved July 10, 1911, being Chap. 116 of the Acts and Resolves of 1911.....	8,000.00
Total amount of Tax Warrants for 1911.....	\$1,588,919.42
Overlay	4,572.55
Amount of Tax Levy.....	\$1,593,491.97
Number of polls 25803 @ \$2.00 each.....	51,606.00
Total amount to be raised by direct tax in 1911	\$1,541,885.97

The valuation of the city as of April 1st, 1911, upon which rate was figured was **\$81,581,268.15**.

A rate of \$18.90 per \$1000.00 of valuation was declared by the Board of Assessors, August 2nd, 1911.

**ASSESSORS' VALUATIONS OF THE REAL AND PERSONAL PROPERTY OF THE CITY OF
LOWELL BY WARDS IN 1911**

RESIDENTS

Wards	Land	Buildings	Total Real Estate	Personal	Total
One	\$ 2,867,405.00	\$ 3,369,425.00	\$ 6,236,830.00	\$ 887,555.00	\$ 7,124,385.00
Two	708,400.00	833,850.00	1,542,250.00	294,250.00	1,836,500.00
Three	2,720,310.00	3,801,175.00	6,521,485.00	1,266,350.00	7,787,835.00
Four	923,810.00	1,389,150.00	2,312,960.00	313,975.00	2,626,935.00
Five	734,180.00	1,149,000.00	1,883,180.00	179,375.00	2,062,555.00
Six	1,288,250.00	2,052,000.00	3,340,250.00	301,625.00	3,641,875.00
Seven	1,994,655.00	2,989,205.00	4,983,860.00	449,475.00	5,433,335.00
Eight	1,983,210.00	3,676,100.00	5,659,310.00	969,110.00	6,628,420.00
Nine	4,386,130.00	5,192,570.00	9,578,700.00	2,168,545.00	11,747,245.00
Totals	\$17,606,350.00	\$24,452,475.00	\$42,058,825.00	\$6,830,260.00	\$48,889,085.00

**ASSESSORS' VALUATIONS OF THE REAL AND PERSONAL PROPERTY OF THE CITY OF
LOWELL BY WARDS IN 1911—Continued**

NON-RESIDENTS

Wards	Land	Buildings	Total Real Estate	Personal	Total
One	\$ 1,346,960.00	\$ 860,650.00	\$ 2,207,610.00	\$ 65,850.00	\$ 2,273,460.00
Two	175,900.00	144,750.00	320,650.00	4,375.00	325,025.00
Three	182,150.00	266,200.00	448,350.00	6,900.00	455,250.00
Four	77,000.00	120,800.00	197,800.00	19,300.00	217,100.00
Five	64,950.00	81,300.00	146,250.00	2,000.00	148,250.00
Six	137,800.00	188,200.00	326,000.00	500.00	326,500.00
Seven	252,500.00	173,125.00	425,625.00		425,625.00
Eight	251,390.00	318,600.00	569,990.00	46,200.00	616,190.00
Nine	283,550.00	188,550.00	472,100.00	5,100.00	477,200.00
Totals	\$ 2,772,200.00	\$ 2,342,175.00	\$ 5,114,375.00	\$ 150,225.00	\$ 5,264,600.00
Corporations					
Res. Bank Shares..	\$ 6,131,445.00	\$10,288,810.00	\$16,420,255.00	\$10,339,985.00	\$26,760,240.00
Total at time of				\$ 667,343.15	\$ 667,343.15
commitment	\$26,509,995.00	\$37,083,460.00	\$63,593,455.00	\$17,987,813.15	\$81,581,268.15
Supplementary	4,200.00	4,200.00	8,400.00	577,075.00	585,475.00
Grand Totals ...	\$26,513,195.00	\$37,087,660.00	\$63,601,855.00	\$18,564,888.15	\$82,166,743.15
Non-resident bank shares not includ- ed in above figures				\$ 606,156.85	\$ 606,156.85

**NUMBER OF INDIVIDUALS, FIRMS, ETC., CORPORATIONS
AND NATIONAL BANKS ASSESSED FOR PROPERTY
IN 1911, AT TIME OF COMMITMENT**

Ward	Residents		Non-Residents		Total num. of all assessed on prop.
	Individuals	Firms Trustees, etc.	Individuals	Firms Trustees, etc.	
1	803	329	101	29	1262
2	343	148	27	7	525
3	1061	257	74	18	1410
4	474	169	18	7	668
5	375	176	19	6	576
6	811	226	62	10	1109
7	1028	263	94	32	1417
8	382	288	153	41	1864
9	1153	364	138	28	1683
Totals	7430	2220	686	178	10514
Number of Corporations.....					173
Number of National Banks.....					5
Total Number of Property Tax Accounts.....					101692
Number Assessed for Poll Tax only at time of commitment..					21786
Total Number of Accounts at time of commitment.....					32478

FROM TABLE OF AGGREGATES

Number of Horses Assessed.....	2341
„ Cows „	312
„ Oxen „	2
„ Swine „	68
„ Fowl „	1035
„ Dwellings „	20579
„ Acres „	6549

EXEMPTED PROPERTY

Under this head are embraced Literary, Temperance, Benevolent, Charitable and Scientific Institutions and Houses of Religious Worship.

Personal Valuation		\$1,367,032.11
Land Valuation	2,850,350.00	
Buildings Valuation	2,850,350.00	
Total Real Estate Valuation.....	<u>\$3,970,785.00</u>	<u>3,970,785.00</u>
Total Valuation of Exempted Property		<u>\$5,337,817.11</u>

CLASSIFICATION OF EXEMPTED PROPERTY

	Personal Valuation	Real Estate Valuation	Totals
Literary Institutions	\$ 139,525.55	\$ 563,045.00	\$ 702,570.55
Temperance ,, 	4,555.25	16,350.00	20,905.25
Benevolent ,, 	33,919.02	176,500.00	210,419.02
Charitable ,, 	946,032.94	394,790.00	1,340,822.94
Scientific ,, 	242,999.35	486,650.00	729,649.35
Houses of Religious Worship		2,333,450.00	2,333,450.00
Totals	\$1,367,032.11	\$3,970,785.00	\$5,337,817.11

Total real estate area exempt—113,259 1000 acres.

**PROPERTY OWNED BY THE CITY AND VALUATION OF
THE SAME (FURNISHED BY DEPARTMENTS)
FIGURED IN RELATION TO THE
CITY DEBT.**

Buildings

City Hall, granite.....	\$ 410,000.00
Memorial Building, granite.....	200,000.00
Police Station, Stable, City Scales and Public Landing, brick	98,250.00
Lighting Station, Willie Street, wood.....	3,000.00
City Stables, Shed, Board of Health Stables, City Car- penter Shop and other buildings on both sides of Broadway, stone, brick and wood.....	100,000.00
City Hospital and Almshouse, brick and wood.....	200,000.00
Rifle Range, wood.....	14,000.00
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	\$1,025,250.00

Fire Department

Engine 1, Gorham Street, brick.....	\$ 27,000.00
Engine 2, Branch Street, brick.....	22,000.00
Engine 3, Palmer Street, (Central Fire Station) brick.	90,000.00
Engine 4, High Street, brick.....	24,000.00
Engine 5, Mammoth Road, brick.....	15,500.00
Engine 6, Fletcher Street, brick.....	18,000.00
Hose 7, Central Street, brick.....	13,000.00
Hose 8, Merrimack Street, brick.....	18,000.00
Hose 9, Lincoln Street, wood.....	5,500.00
Hose 10, Fourth Street, brick.....	15,000.00
Hose 11 and Truck 1, Lawrence Street, brick.....	26,000.00
Hose 12 and Truck 4, West Sixth Street, brick.....	28,000.00
Truck 2 and Chemical, Westford Street, brick.....	18,000.00
Protective 1, Warren Street, brick.....	11,000.00
	<hr/>
	\$ 341,000.00

Grammar and High Schools

High, Kirk and Anne Streets, brick, 20 rooms and hall.	\$ 250,000.00
High Annex, John and Paige Streets, brick, 16 rooms and drill hall.....	105,000.00
Bartlett (old), Clark Street, brick, 8 rooms.....	25,000.00
Bartlett (new), Wannalancit Street, brick, 16 rooms and hall	108,000.00
Butler, Gorham Street, brick, 12 rooms and hall.....	63,000.00
Colburn, Lawrence Street, brick, 8 rooms.....	25,000.00
Edson, Highland Street, brick, 11 rooms.....	25,000.00
Franklin, Branch Street, brick, 8 rooms.....	25,000.00
Green, Merrimack Street, brick, 10 rooms and hall....	105,000.00
Greenhalge, Ennell Street, brick, 10 rooms and hall...	75,000.00
Highland, Pine Street, brick, 12 rooms and hall.....	67,000.00
Lincoln, Chelmsford Street, brick, 12 rooms and hall..	77,000.00
Moody (old), East Merrimack Street, brick, wood ell, 10 rooms	20,000.00
Moody (new), Rogers Street, brick, 12 rooms and hall.	80,000.00
Mann, Broadway, brick, 8 rooms, wood, 12 rooms.....	25,000.00
Pawtucket, Mammoth Road, brick, 8 rooms and hall...	53,000.00
Riverside, Woburn Street, wood, 8 rooms.....	35,000.00
Varnum, Myrtle Street, brick, 17 rooms and hall.....	110,000.00
Washington, Lang Street, brick, 10 rooms and hall....	90,000.00
	<hr/>
	\$1,363,000.00

Primary Schools

Agawam Street, wood, 4 rooms.....	\$ 9,000.00
Ames Street, wood, 4 rooms.....	9,500.00
Billings Street, wood, 4 rooms.....	16,000.00
Central Street, wood, 4 rooms.....	13,500.00
Cross Street, brick, 4 rooms.....	24,000.00
Carter Street, brick, 8 rooms and hall.....	52,000.00
Chapel Street, wood, 2 rooms.....	4,000.00
Cottage Street, wood, 2 rooms.....	4,500.00
Colburn Primary, Charles Street, wood, 7 rooms and hall	31,000.00
Charles Street, wood, 4 rooms.....	20,000.00
Cabot Street, brick, 4 rooms.....	23,500.00
Cheever Street, wood, 4 rooms.....	12,000.00
Dover Street, wood, 4 rooms.....	13,500.00
Favor Street, brick, 4 rooms.....	28,000.00
Fayette Street, wood, 2 rooms (unused).....	3,500.00
Grand Street, wood, 2 rooms.....	5,000.00
Howard Street, brick, 2 rooms.....	5,000.00
High Street, wood, 3 rooms.....	9,000.00
Kirk Street, brick, 2 rooms.....	18,000.00
Lyon Street, brick, 4 rooms.....	20,000.00
Lyon Street Annex, wood, 1 room.....	5,400.00
Lexington Avenue, wood, 2 rooms.....	10,000.00
Lakeview Avenue, wood, 4 rooms.....	8,500.00
London Street, wood, 2 rooms.....	3,000.00
London Street Annex, wood, 2 rooms.....	5,000.00

Mammoth Road, Kindergarten, wood, 1 room.....	4,000.00
Morrill, brick, 4 rooms.....	19,000.00
Middlesex Village, wood, 4 rooms.....	16,000.00
Moody Street, wood, 6 rooms.....	20,000.00
Oakland, wood, 2 rooms.....	12,000.00
Old Middlesex Village, wood (unused).....	2,000.00
Plain Street, wood, 6 rooms.....	21,000.00
Powell Street, wood, 2 rooms.....	8,000.00
Pond Street, wood, 2 rooms.....	6,000.00
Pine Street, wood, 4 rooms.....	23,000.00
School Street, wood, 2 rooms (unused).....	7,500.00
Tenth Street, wood, 4 rooms.....	9,000.00
Worthen Street, brick, 5 rooms.....	25,000.00
Weed Street, wood, 4 rooms.....	10,500.00
West Sixth Street, wood, 4 rooms.....	7,000.00

Total value of real estate..... \$ 542,900.00

Park Department

	Acres	
The Rogers Fort Hill Park.....	34.40	\$ 150,000.00
The South Common.....	22.48	200,000.00
The North Common.....	11.39	100,000.00
Tyler Park	1.81	8,000.00
Belvidere Park	1.77	20,000.00
Mt. Vernon Park.....	0.50	4,350.00
Varnum Park	0.135	6,000.00
Monument Square	0.092	15,000.00
Penniman Square	0.051	450.00
Lincoln Square	0.016	200.00
Hovey Square	0.010	50.00
Mansur Square	0.040	150.00
Water Works Square.....	0.047	500.00
Coburn Square	0.252	1,000.00
Hutchinson Square	0.037	150.00
Lenox Square	0.181	1,500.00
Franklin Square	0.058	1,500.00
Princeton Square	0.028	150.00
Middlesex Square	0.034	200.00
Lincoln Playground	1.525	6,000.00
Fayette St. Playground.....	0.170	2,000.00
Varnum Ave., Riverbank.....	0.456	100.00
Colonial Ave., Riverbank.....	3.50	2,000.00
Glacial Oval		100.00
City Hall and Memorial Hall Grounds.....	0.50	65,700.00
Lincoln School Grounds.....	1.02	\$ 4,445.00
Highland School Grounds.....	1.24	5,392.00
Greenhalge School Grounds.....	2.30	10,000.00
Moody School Grounds.....	1.18	7,684.00
Riverside School Grounds.....	1.05	2,281.00
Shedd Playground	56.00	11,200.00

Total142.272 \$ 627,502.00

Miscellaneous Real Estate

Lot of Land on Chelmsford Street.....	\$ 5,000.00
Lot of Land on Fletcher and Bowers Street.....	20,000.00
Lot of Land on Tenth Street.....	5,000.00
Cremator	10,000.00
Rifle Range, Dracut.....	2,700.00
Harris Land, Dracut, 28 acres.....	600.00
Parker Land, Dracut, 20 acres.....	1,400.00
Hildreth Land, Dracut, 17 acres.....	500.00
Meadow Land, Dracut, 5 acres.....	275.00
Swan Land, Dracut, 5 acres.....	200.00
Hamblett Land, Wigginvill, 2 acres.....	400.00
Clark Road, Gravel Bank, 3 acres.....	900.00
	<hr/>
	\$ 46,975.00

Personal Property in Charge of Commissioner of Public Safety

Mayor:	
Furniture, etc., in office.....	\$ 893.00
Health:	
Furniture, etc., in office.....	177.00
Bacteriological Laboratory	148.00
Milk & Vinegar Office.....	860.00
Horses	5,055.00
Wagons and Sleds.....	5,850.00
Harnesses	818.00
Shop	1,350.00
Law:	
Furniture, etc., in office.....	500.00
Police:	
Furniture, etc., in offices.....	2,453.00
Equipment	1,375.00
Stable	7,331.00
Electricians' department	26,277.00
State Aid:	
Furniture, etc., in office.....	200.00
Charity:	
Outdoor Relief	4,000.00
Hospital	27,000.00
	<hr/>
	\$ 84,287.00

Personal Property in Charge of Commissioner of Finance

Auditor—Furniture, etc., in office.....	\$ 1,305.00
Assessors ,,	1,100.00
Treasurer ,,	1,000.00
City Clerk ,,	550.00
Elections ,,	7,500.00
Registrars ,,	85.00
Supply ,,	575.00
	<hr/>
	\$ 12,115.00

**Personal Property in Charge of Commissioner of
Streets and Highways**

Streets:	
Store Room	\$ 4,070.00
Yard	14,340.00
Shop	2,000.00
Stone	6,780.00
Blacksmith Shop	890.00
Tool House	568.00
Dracut ledge	14,700.00
Horses and harnesses.....	21,788.00
Miscellaneous	2,200.00
Watering Streets:	
Carts, etc.	12,635.00
Sewer:	
Office	725.00
Miscellaneous	19,850.00
Lighting Streets	10,025.00
Engineer:	
Furniture, etc., in office.....	2,560.00
Tools and Material.....	2,200.00
	<hr/>
	\$ 115,331.00

**Personal Property in Charge of Commissioner of
Public Property and Licenses**

Building:	
Shop and storehouses.....	\$ 10,500.00
Machinery, tools, etc.....	2,800.00
Hardware	150.00
Lumber	767.00
School furnishings	2,000.00
Elections property	6,009.00
Coffins, stock and tools.....	352.00
Stable property	1,731.00
Masons' stock and tools.....	200.00
Pipers' stock and tools.....	700.00
Painters' stock and tools.....	1,100.00
Office Property	826.00
Cemetery	5,737.00
License Commission	850.00
Park:	
Furniture, etc., in office.....	800.00
Stable and yard.....	8,100.00
Smoke Inspector	70.00
Moths	1,800.00
Messenger:	
Furniture in charge.....	1,300.00
Boiler room	3,100.00
Weigher	275.00
Sealer	900.00
Wires	400.00

LAND OWNED BY THE CITY FOR BURIAL PURPOSES

Date	Location	Grantee	Area	Price	Grantor
Nov. 5, 1810	School St. †1	Inhabitants of Chelmsford	1 acre 23 rods	23.00	Jeel Spaulding
Mar. 31, 1832	Gorham St. †2	136 rods in Chelmsford	4 acres 81 rods	428.00	Simon and Susanna Parker
Nov. 16, 1846	" †3	Chelmsford	30 acres	1,500.00	William and Hannah Spence
Nov. 25, 1893	" †3	Taken by resolution, Nov. 17, 1893, J. J. Pickman, Mayor	112,980 sq. ft. 13,846 "	4,236.75 692.30	Mary and John Gannon William B. Spaulding
Nov. 15, 1894	" †3		10,527 "	526.35	J. J. Donovan
Dec. 24, 1894	" †3		137,353 " or 3.1 acres	(a) 1,800.00	Seven Ohlson
1893	" †3	Taken by resolution, Sept. 10, 1891, Geo. W. Fifield, Mayor	44,139 sq. ft. 88,428 "	3,290.00	Charles D. Starbard
1894	" †3		133,606 "	6,056.95	William Manning
1790	"		266,173 " or 6.1 acres	50.00	Seven Ohlson
July 20, 1893	" †3 annex		18.972 acres	5,691.60	Chas. W. and Sarah Swan
1899	" †3		7 acres	2,000.00	T. McOwen
Dec. 17, 1877	" *				

†1 is the Cemetery on School Street.

†2 is the old Cemetery on Gorham Street.

†3 is the new Cemetery on Gorham Street, known as the Edson Cemetery.

* January, 1878, \$400.00 was returned to the City on purchase McOwen land, reducing cost to \$1,600.00.

(a) Paid on execution.

VALUATION

School Street	\$ 8,000.00
Gorham Street	35,000.00
	<hr/> \$43,000.00

Schools:

Furniture, etc., in office.....	1,150.00
Horses, etc.	1,000.00
Equipment, High School.....	10,400.00
Equipment, Industrial School.....	11,700.00
	<hr/>
	74,717.00

**Personal Property in Charge of Commissioner of
Water Works and Fire Departments**

Fire:

Chief's office	\$ 7,619.35
Repair Shop	579.00
Engine Co. No. 1, Gorham.....	8,767.13
Engine Co. No. 2, Branch.....	9,389.00
Engine Co. No. 3, Palmer.....	7,773.30
Engine Co. No. 4, High.....	5,172.50
Engine Co. No. 5, Pawtucketville.....	2,950.90
Engine Co. No. 6, Fletcher.....	6,592.60
Hose Co. No. 7, Central.....	2,566.95
Hose Co. No. 8, Merrimack.....	2,000.85
Hose Co. No. 9, Lincoln.....	2,539.13
Hose Co. No. 10, Fourth.....	3,955.30
Hose Co. No. 11, Lawrence.....	1,966.60
Hose Co. No. 12, West Sixth.....	2,443.65
Hook & Ladder Co. No. 1, Lawrence.....	2,429.25
Hook & Ladder Co. No. 2, Westford.....	3,517.91
Hook & Ladder Co. No. 3, Palmer.....	5,169.55
Hook & Ladder Co. No. 4, West Sixth.....	6,559.78
Protective Co. No. 1 Warren.....	4,327.70
Fire Alarm Telegraph.....	47,327.00
	<hr/>
	\$ 133,647.45

Water Works—Real Estate:

Terminal chamber, gate house (brick) located on Conduit Street right of way	\$ 4,000
Two small brick bldgs., manhole and blow off located on Conduit Street right of way	1,000
Vacant land "Fels Park" 27163 sq. ft.	600
Strip of land Sarah Ave. and Moody Street, 28072 sq. ft.	2,800
Brick manhole structure	2,000
Land Moody St., Gershom Ave. and Gardner Ave., 17,252 sq. ft.	2,587
Brick manhole structure	1,000
Land White Street, 5833 sq. ft.	300
Inlet chamber (brick)	10,000
Land Varnum Ave., 15,540 sq. ft.	1,550
Tract of land between River and Varnum Ave., 166,320 sq. ft.,	5,000
Filter basin, brick base, wooden superstructure, Lower Pumping Station, hollow tile block struc- ture, (unf.)	8,000
	7,000

Wooden buildings	500
Land 2 1-4 acres	900
Upper Pumping Station, wooden bldg.	2,000
1 Dwelling House	1,500
1 " "	800
Land 55.78 acres	22,300
" Cushing Farm" bldgs.	1,200
Land 33 acres Varnum Ave.	6,600
Land on Boulevard and Boulevard Street, 11 acres	4,400
Pumping Station No. 1, West Sixth St.	100,000
Stable and sheds	15,000
Store house and sheds	2,000
Land West Sixth, Hampshire and Jewett Streets, 51,101 sq. ft.	12,775
" Supt. Residence" 40 West Sixth Street	1,600
Land West Sixth Street, 8133 sq. ft.	2,450
High Service Reservoir	15,000
Land 54,730 sq. ft.	1,100
" 32,470 " " (Town of Dracut)	650
Low Service Reservoir—Gate House	10,000
Dwelling House	1,000
New Reservoir, low service (unfd.)	40,000
Reservoir, low service	70,000
Land 651,600 sq. ft.	32,600
Pumping Station, Plain and Chelmsford Sts., wooden buildings and chimney	3,000
Land Plain and Chelmsford Sts., 1,684,930 sq. ft.	25,300
Land " " " " 115,640 " "	600
Land in Town of Chelmsford, 1,531,109 " "	3,500
	<hr/>
	422,612.00
Pumps, Engines, Machinery, Pipes, Conduits, Mains and other personal property	1,553,276.67
	<hr/>
	\$1,975,888.67
	<hr/>

CITY DEBT

Total Valuation of all Real Estate and Personal Property owned by the City	\$6,385,613.12
Gross City Debt less Sinking Funds	<u>2,463,689.39</u>
Excess in Valuation of City Property over Gross City Debt	\$3,921,923.73

**BALANCE SHEET OF ASSETS AND LIABILITIES OF
THE CITY OF LOWELL, DECEMBER 31, 1911**

Assets	
Ordinary City Debt Sinking Fund.....	\$ 436,031.80
Water Debt Sinking Fund.....	582,354.61
Outstanding Assessments:	
Taxes	741,752.99
Sidewalk	3,576.96
Sewers	9,843.79
Street Watering	7,770.92
Moth	1,968.68
Department Bills	6,913.91
Cash Balance December 31.....	154,316.45
	<hr/>
Total Available Assets.....	\$ 1,944,530.11
	<hr/>
Valuation of Water Works, both Real Estate and Personal Property	1,975,888.67
Valuation of City Buildings, Land, Personal Property	4,409,724.45
	<hr/>
Total Unavailable Assets.....	\$ 6,385,613.12
	<hr/>
Total Available Assets.....	1,944,530.11
Total Unavailable Assets.....	6,385,613.12
	<hr/>
Grand Total	\$ 8,330,143.23

Liabilities	
Ordinary City Debt.....	\$2,314,575.80
Water Works Debt.....	1,167,500.00
	<hr/>
Total Gross City Debt.....	\$3,482,075.80
Temporary Loan	700,000.00
Balance Unexpended	181,736.04
	<hr/>
Total Liabilities	4,363,811.84
Surplus of Assets.....	3,966,331.39
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Grand Total	\$8,330,143.23

INDEX

General Information:

	Page
Assets and Liabilities.....	214
Assessors' Report	200
Auditors' Report by Schedules.....	13
Accountants' Report	153
Appropriation and Expenditures.....	23
City Appropriations	198
Cash Receipts and Payments.....	6-7
City Cemeteries—Trust Funds.....	151
City Debt Statements.....	8
City Debt Payments.....	157
Commissioners of Sinking Funds Report.....	177
General Treasury Fund—Revenue.....	11
General Treasury Fund—Payments.....	12
General Treasury Fund Taxes.....	11
Insurance on Property.....	192
Limit of Indebtedness.....	9
Outstanding Accounts Payable.....	152
Property Exempt	187
Receipts and Payments Classified.....	10
Cost of Sewers.....	188
Table of Expenditures.....	190
Table of Loans.....	12
Tables of Valuations.....	189
Temporary Accounts	10
Trust Funds	174
Valuation of City Property.....	207

By Schedules:

1 Departmental	14
2 Protection of Life and Property.....	15
3 Health and Sanitation.....	16
4 Highways and Bridges.....	16
5 Charities	17
6 Soldiers' Benefits	17
7 Education	18
8 Recreation	19
9 Unclassified	19
10 Public Service Enterprises.....	20
11 Cemeteries	20
12 Interest	21
13 Municipal Indebtedness	21
14 Sinking Funds	21
15 Taxes, Licenses, Permits.....	22
16 Refunds	22

By Accounts:

Abatements	149-200
Auditor	36
Assessors	37
Bridge Repairs	94
Band Concerts	127

	Page
Baltimore March	129
City Council Fund.....	34
Clerk of Committees.....	44
Clerk of Council.....	44
City Clerk	39
Care of Trees.....	68
Columbus Day	131
Congress and Billerica Street Bridge.....	90
Contagious Hospital	82
Charity Department	95
Carney Medal Fund.....	132
County Tax	147
Claims	132
Cemeteries	143
City Debt	146
Elections	45
Engineering	48
Fire	56
Fire House Improvements.....	71
Fish Warden	69
Fourth of July.....	127
Gorham Streets	92
Grade Crossing	148
Health Office	72
Health Yard	75
Huntington Hall Fund (Commissioners).....	51
Insurance	50
Inspector of Buildings.....	63
Inspector of Wires.....	66
Inspector of Milk and Vinegar.....	77
Inspectors of Animals.....	79
Interest	145
Lawrence Street Bridge.....	91
Liquor Licenses	148
Law	43
Lighting	90
Library	120
Labor Day	130
Mayor	35
Messenger	41
Moths	68
Municipal Register	51
Macadamizing Streets	93
Memorial Day	126
Military Aid	106
New Sidewalks	89
Paving Aiken Street.....	92
Police	52
Pound Keeper	69
Play Grounds	125
Parks	122
Registrars	47
Race Street Fire House.....	70
Refunds	148
Releases	148

	Page
Rifle Range	62
Supply	49
State Supervisors	47
Sealer	67
Sewer Construction	81
Sewer Maintenance	79
Streets	83
Street Watering	89
State Tax	90-147
Smoke Inspector	69
Schools	109
School Inspection	82
School Houses	117
School Repairs	121
State Aid	106
Stromquist Avenue	94
Soldiers' Relief	106
Shedd Park	128
Sinking Funds	147
Temporary Loans	146
Taxes—County	147
Taxes—City	147
Taxes—National Bank	147
Taxes—State	147
Treasurer	39
Textile School	120
Underground Wires	61
Weigher	142
Water Works	133
Water Works, New Pump.....	139
Water Works, New Wells.....	140

THIRTY-NINTH
ANNUAL REPORT
OF THE
LOWELL WATER BOARD
TO THE
City Council of the City of Lowell, Mass.
AND THE
Reports of the Superintendent of Water Works
and of the City Engineer to the
Water Board for 1911.



LOWELL, MASS.,
THE LAWLER PRINTING COMPANY,
1912

Report of the Water Board

OFFICE OF THE LOWELL WATER WORKS

January 1, 1912.

To the Commissioner of Water Works:—

Herewith is presented to you a record of the acts of the Water Board for the year ending December 31, 1911, being the 39th and last annual report of the Water Board, as under the new charter adopted by the citizens, the Water Board was abolished on January 1st, 1912, and the Water Works will be administered by a Commissioner.

Mr. James F. Furlong succeeded Mr. Robert J. Crowley whose term expired in March, after serving eight years, five of which he was President of the Board.

On March 21st a communication was sent to the City Council asking that land on the Boulevard be taken for the extension of the water supply as recommended by the State Board of Health. The City Council acting favorably on this request, the Water Board, on May 5th, voted to ask the City Council to authorize a loan of \$100,000.00 for new wells, new reservoir and pumping station, and this sum became available in August.

The Board engaged Byam Bros., real estate agents, to

look up the owners of the land taken and try to make settlements with them upon basis of 2c per square foot, and they have succeeded in obtaining deeds from the following:

Geo. Z. Allard,	9 lots & bldg,	18,000 sq. ft.,	\$2,200.00
Harry C. Clay	1 lot	7,280 " "	150.00
Geo. Coronois	2 lots & bldg,	10,540 " "	183.00
Dunnigan & Ryan	6 "	24,251 " "	485.00
E. & E. Elie	5 " & bldg,	20,016 " "	2,000.00
D. J. Generalis	1 lot	7,467 " "	150.00
E. S. Howe	1 "	136,890 " "	2,769.46
Winslow & Patridge	17 lots	103,521 " "	1,601.56

leaving 6 owners of 55 lots to be settled with.

Soon as the loan was available for use, Mr. F. A. Barbour. Engineer, of Boston, an expert on cement reservoirs was consulted and a contract was entered into with him in regard to plans for a new reservoir, and under his advice a site was selected on land of the City, adjacent to, but higher than the present reservoir, and plans prepared, and excavating was begun, to be ready for the cement work early in the spring. Bids for the cement work will be called for early in the year.

Mr. Barbour was also authorized to prepare plans for a pumping station at Boulevard, and bids were called for and opened October 25th with the following results:

Patrick O'Hearn	\$22,494.00
Tyson Construction Co.	24,686.00
Cyrus Barton	25,000.00
Connors Bros.	25,000.00
James Whittet.	27,980.00
F. F. Jonsberg Co.	28,698.00

The contract being awarded to P. O'Hearn, the lowest bidder.

The new Allis-Chalmers Pump was tested in August under the terms of the contract, and Mr. Will J. Sando, Engineer, reported that the test was satisfactory and the engine performed the guarantee of the contract. An additional gallery was provided for the new engine by the builders at a cost of \$1,900.00, also an additional gallery for the Holly Pump at the Boulevard by the Holly people, for \$640.00.

A new 78 inch tubular boiler at Cook Plant was installed by Scannell Boiler Works for \$1,356.00, in place of one condemned by the Boiler Inspector.

A new Buick Automobile Truck at a cost of \$1,025.00 was added to the Department, making two Buick trucks in use.

September 7th, the State Board of Health advised the Board that "Cook Well water drawn through lead pipes * * * is a serious menace, * * * and to continue to supply this water to the citizens under present conditions, would be wilful injury to the health of the people." This station has been running about six months but was shut down previous to the receipt of this advice.

500 tons steam coal was purchased by the Supply Department for Centralville Station from E. A. Wilson & Co. for \$4.88 per ton, and 1,000 tons for same station from E. Cawley for \$4.65 per ton, and 500 tons for Cook Station from E. Cawley for \$4.35 per ton and 200 tons from D. T. Sullivan for \$4.42 per ton. No coal was purchased for the Boulevard Station.

100 tons 8 inch pipe for \$22.60 and 350 tons various sizes for \$22.30 were purchased during the year.

The receipts were \$223,703.98, a decrease of \$41.27 on 1910, and expenditures \$229,189.30, an increase of \$7,954.85. Total debt of the Water Works increased \$16,300.00 owing to the borrowing of \$100,000.00 for New Wells, Reservoir

and Pumping Station, while the \$75,000.00 High Service Bonds matured and were paid by sinking fund, and \$8,700,00 was paid on notes.

The Reports of the Superintendent, Civil Engineer and Secretary of the Board give statistics and details of the work of the Department for the year.

J. W. CRAWFORD,

Secretary Water Board.

FINANCIAL STATEMENT—LOWELL WATER WORKS, 1911

TABLE I	CHARGES				RECEIPTS BY ACCOUNTS			
	WATER			Total Charge	Receipts	Discounts	Abatement	Due
	Rate	Metered	Total					
Transfer .....	.....	.....	.....	\$ 3,634.13	\$ 1,179.54	\$ 1.74	\$139.99	\$2,312.86
January	\$ 61.12	\$ 36,664.42	\$ 36,725.54	\$ 5,977.51	39,104.06	3,469.90	30.00	99.09
April .....	.....	46,100.59	46,100.59	2,361.67	44,180.78	4,149.20	41.97	90.31
May	21,311.73	.....	21,311.79	.....	19,142.03	1,880.48	221.15	61.13
July	367.56	72,201.36	72,568.92	6,273.91	71,684.84	6,813.04	180.73	164.22
October	341.12	45,016.30	45,357.42	7,973.56	46,450.29	4,252.31	23.20	2,605.18
Interest and Premium on Loan .....	.....	.....	.....	.....	1,955.44	.....	.....	.....
TOTAL	\$22,081.53	\$199,982.67	\$222,064.26	\$22,586.65	\$223,703.98	\$20,566.67	\$637.04	\$5,332.79

FINANCIAL STATEMENT—LOWELL WATER WORKS, 1911, OUTGO

TABLE II	Pay Roll and Salaries	Water Works Supplies	Interest and Principal	Refund and Vacancies	General Expenses	Stable	Coal	Engineer- ing	TOTAL 1911	TOTAL 1910
January.....	\$ 7,468 76	\$ 1,130 95		\$ 21 79	\$ 81 23	\$307 14	\$ 1,094 61		\$ 10,104 48	\$ 11,041 30
February.....	7,006 02	1,574 51	\$ 560 00		118 50	218 27	708 95		10,186 25	10 049 64
March.....	7,098 05	6,246 36	160 00	12 20	375 27	451 79	1,059 77		15,403 44	12,143 27
April.....	10,605 47	4,773 02	100 00	8 02	526 01	1,485 36	22 70		17,520 58	23,144 12
May.....	9,088 83	3,705 17	20,794 12	158 37	425 93	480 10	4,183 50		38,836 02	32,327 41
June.....	8,069 28	1,887 04	560 00	62 72	539 90	162 97	805 29		12,087 20	14 583 30
July.....	11,694 56	5,132 35	1,200 00	31 10	391 84	497 96	1,271 43	\$ 503 22	20,722 46	17,169 24
August.....	10,877 57	3,764 09	320 00	47 25	102 97	254 91	973 33	157 85	16,497 97	28,212 24
September.....	10,557 08	3,112 31	100 00	59 70	252 01	205 50	10 20		14,296 80	13 096 15
October.....	9,073 78	3,772 08	80 00	48 47	181 20	633 69		128 31	13,917 53	14,504 32
November.....	9,849 59	3,409 26	20,780 00	6 62	68 56	110 89			34,224 92	32,935 71
December	11,486 87	2,772 30	10,360 00	43 12	75 56	422 33		231 47	25,391 65	12,027 75
TOTAL	\$112,875 86	\$41,279 44	\$55,014 12	\$499 36	\$3,138 98	\$5,230 01	\$10,129 78	\$1,020 85	\$229,189 30	\$221,234 45

FINANCIAL STATEMENT—LOWELL WATER WORKS, 1911.

SUB-DIVISION OF "OTHER THAN WATER CHARGES" FROM TABLE I.

TABLE III	Meters Sold	Expense Setting Meters	Expense Repairs to Meters	New Services	Changed Services	Labor and Material	Shut-off Fees	Interest	TOTAL 1911	TOTAL 1910
January.....	\$1,848 15	\$130 55	\$ 411 87	\$ 933 71	\$ 643 75	\$2,009 48			\$ 5,977 51	\$ 4,872 89
April.....	711 75	57 98	401 98	480 12	79 83	624 01	\$ 6 00		2,361 67	2,013 59
July.....	2,207 87	225 21	381 91	1,103 39	751 72	1,409 94	2 00	\$191 87	6,273 91	5,747 61
October.....	1,713 02	170 00	371 30	977 73	792 79	3,940 72	8 00		7,973 56	11,021 02
	\$6,480 79	\$583 74	\$1,567 06	\$3,494 95	\$2,268 09	\$7,984 15	\$16 00	\$191 87	\$22,586 65	\$23,655 11

FINANCIAL STATEMENT—LOWELL WATER WORKS, 1911.

SUB-DIVISION OF "PAY ROLL AND SALARIES" FROM TABLE II.

TABLE IV.	Salary W. B.	Meter Work	Office and Officials	Extension and C'nstr'ct'n	P. S. Central-ville	P. S. Boulevard	P. S. Cook Plant	New Services	Change Services	General Maint'n'ce	TOTAL 1911	TOTAL 1910
Jan.....	\$ 133 32	\$ 496 75	\$ 989 24	\$ 95 90	\$ 758 72	\$ 621 04	\$ 122 00	\$ 15 75	\$ 43 50	\$ 4,192 54	\$ 7,468 76	\$ 7,056 51
Feb.....	133 32	347 75	920 74	95 90	772 22	640 54	.....	51 75	2 25	4,041 55	7,006 02	6,694 91
Mar.....	133 32	476 25	962 44	68 50	731 72	644 04	274 18	.....	78 00	3,729 60	7,098 05	7,370 34
Apr.....	133 32	483 16	1,287 41	485 13	813 90	804 30	485 00	161 09	109 09	5,843 07	10,605 47	10,517 21
May.....	133 32	386 19	1,046 80	1,624 47	700 22	641 90	366 77	344 93	410 90	3,433 33	9,088 83	9,032 60
June.....	133 32	346 37	1,046 80	905 69	628 07	590 54	447 04	234 55	323 11	3,413 79	8,069 28	8,950 50
July.....	133 36	393 26	1,308 50	899 12	855 15	855 55	551 00	306 31	383 37	6,008 94	11,694 56	10,636 90
Aug.....	133 36	343 38	1,016 80	1,981 83	753 72	718 54	55 00	195 87	405 25	5,273 82	10,877 57	8,816 07
Sept.....	133 36	387 25	1,224 14	1,151 09	906 15	839 55	220 00	384 00	302 86	5,008 68	10,557 08	9,017 02
Oct.....	133 36	343 72	1,046 80	529 71	744 22	741 96	.....	208 64	179 54	5,145 83	9,073 78	10,355 16
Nov.....	133 36	317 88	1,046 80	115 08	762 13	730 21	.....	196 50	295 00	6,252 63	9,849 59	8,022 97
Dec.....	133 28	389 57	1,334 57	724 04	1,007 27	915 37	.....	293 00	256 75	6,433 02	11,486 87	9,253 54
	\$1,600 00	4,711 53	\$13,231 04	\$8,676 46	\$9,433 49	\$8,743 54	\$2,520 99	\$2,392 39	\$2,789 62	\$58,776 80	\$112,875 86	\$105,723 73

TABLE V.
FINANCIAL STATEMENT
LOWELL WATER WORKS, 1911.

SUB-DIVISION "WATER WORKS SUPPLIES" FROM TABLE II.

Supplies, Centralville Station.....	\$ 655 35
Supplies, Boulevard Station.....	1,000 42
Supplies, Cook Station	2,299 45
Cast Iron Pipe	11,233 50
Hydrants, Gates and Boxes.....	3,584 05
Small Pipe and Boxes	7,539 97
Meters	5,175 01
Machinery and Tools..	2,711 37
Miscellaneous	7,080 32
	<hr/>
	\$41,279 44

TABLE VI.
FINANCIAL STATEMENT
LOWELL WATER WORKS, 1911.

DETAIL OF "PRINCIPAL AND INTEREST" FROM TABLE II.

TABLE VI.	Amount of Debt Jan. 1, 1911	Rate	Interest Paid 1911	Paid on Notes 1911	Amount of Debt Jan. 1, 1912	Date of Ma- turi- ty	Purpose of Loan
Water Loan Bonds	\$1,000,000 00	4	.....	.....	\$1,000,000 00	1920	Water Works
5 Coupons No. 38 Nov. 1, 1909	.....	.....	\$ 100 00	.....	.....	.....	.....
8 Coupons No. 39 May 1, 1910	.....	.....	160 00	.....	.....	.....	.....
49 Coupons No. 40 Nov. 1, 1910	.....	.....	980 00	.....	.....	.....	.....
975 Coupons No. 41 May 1, 1911	.....	.....	19,500 00	.....	.....	.....	.....
940 Coupons No. 42 Nov. 1, 1911	.....	.....	18,800 00	.....	.....	.....	.....
Sundry persons	.....	.....	1,340 00	.....	.....	.....	.....
High Service Bonds	75,000 00	4	.....	.....	Paid by Sinking Fund	1911	High Service
12 Coupons No. 59 May 1, 1911	.....	.....	1,200 00	.....	.....	.....	.....
15 Coupons No. 60 Nov. 1, 1911	.....	.....	1,500 00	.....	.....	.....	.....
Loan	60,000 00	4	2,400 00	\$6,000 00	54,000 00	1920	Pump Loan
Loan	16,200 00	4 7/8	334 12	2,700 00	13,500 00	1916	Wiggin- ville
Loan .....	.....	.....	.....	.....	100,000 00	1921	New Wells Reservior and P.S.
	\$1,151,200 00		\$46,314 12	\$8,700 00	\$1,167,500 00		

TABLE VII.
FINANCIAL STATEMENT,
LOWELL WATER WORKS, 1911.
MAINTENANCE

Paid for Labor and Salaries

Water Board.....	\$ 1,600 00
Office and Officials	13,231 04
Pumping Stations.....	20,698 02
Meter Work.....	4,711 53
Engineering.....	1,020 85
General Maintenance.....	61,566 42
	<hr/>
	\$102,827 86

Paid for Material

Output as per Stock Book.....	\$ 8,941 49
Water Works Supplies	12,930 67
Stable	5,230 91
Pumping Station Supplies.....	3,955 22
Fuel	10,129 78
Interest	46,314 12
	<hr/>
	\$87,502 19
	\$190,330 05

CONSTRUCTION

Paid for Labor.....	\$11,068 85
Output as per Stock Book.....	14,681 12
Payments in loans	8,700 00
	<hr/>
	\$34,449 97

TABLE VIII.
FINANCIAL STATEMENT
LOWELL WATER WORKS, 1911.

\$60,000.00 LOAN FOR NEW PUMP

Balance from 1910.....		\$59,514 87
Transferred from Water Works		265 41
		<hr/>
		\$59,780 28
Expended for Labor.....	\$ 7,265 13	
Material	7,715 15	
Pump Contract.....	40,700 00	
Boiler Contract.....	4,100 00	
	<hr/>	<hr/>
		\$59,780 28

TABLE IX.
FINANCIAL STATEMENT
LOWELL WATER WORKS, 1911.

LOAN FOR NEW WELLS, RESERVOIR AND PUMPING STATION.

Amount of Loan.....		\$100,000 00
Expended for Wells.....	\$14,784 54	
Reservoir	7,082 95	
Pumping Station.....	1,351 50	
	<hr/>	23,218 99
		<hr/>
		\$76,781 01

Report of the City Engineer

OFFICE OF THE CITY ENGINEER.

LOWELL, MASS., January 1, 1912.

To the Commissioner of Water Works and Fire Protection:

DEAR SIR:—I have the honor to submit the Thirty-ninth Annual Report, for the year ending December 31, 1911.

PUMPAGE

Total net pumpage for 1911	1,922,567,017 Gallons
Total net pumpage for 1910	1,989,489,076 Gallons
Decrease in 1911	66,922,059 Gallons

CONSUMPTION

Consumption for 1911	1,924,537,162 Gallons
Consumption for 1910	1,986,683,034 Gallons
Decrease in 1911	62,145,872 Gallons

The maximum pumpage for any one day was on Saturday, June 24th, viz:

At West Sixth Street Station	7,057,566 Gallons
At Cook Wells Station	2,409,600 Gallons
Total	9,467,166 Gallons

The maximum pumpage for one week was on the week of May 2nd to May 8th, viz.:

At West Sixth Street Station	36,447,120 Gallons
At Cook Wells Station	18,439,680 Gallons
Total	54,886,800 Gallons

High Service pumpage for 1911.....	79,988,146 Gallons
High Service pumpage for 1910	65,724,624 Gallons
Increase in 1911	14,263,522 Gallons

Cost of Low Service pumpage in 1911, \$16.91 per million gals.	
Cost of Low Service pumpage in 1910. 16.54 per million gals.	
Increase in 1911 .....	.37 per million gals.

Cost of High Service pumpage in 1911, \$14.83 per million gals.	
Cost of High Service pumpage in 1910. 14.20 per million gals.	
Increase in 1911 .....	.63 per million gals.

Cost of Low Service pumpage, exclusive of Cook Wells, in 1911.....	\$16.74 per million gals.
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Total cost of High Service pumpage (Cost of Low Service plus cost of High Service) exclusive of Cook Wells in 1911	\$31.57 per million gals.
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Total cost of High Service pumpage (cost of Low Service plus cost of High Service) exclusive of Cook Wells in 1910\$30.36 per million gals.
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Increase in 1911	\$ 1.21 per million gals
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TABLE SHOWING QUANTITY PUMPED EACH MONTH AT THE SEVERAL STATIONS
DURING THE YEAR 1911

Months	PUMPING STATIONS										Grand Totals	Net Totals
	DRIVEN WELLS					WEST SIXTH STREET						
	Cook Wells	Pawtucket Boulevard Wells		Totals	Net Totals	Worthing- ton High Duty	Worthing- ton Duplex	Allis Chalmers	Totals Low Service	High Service		
		Lower	Upper										Totals
Jan.....	.....	149,607,663	.....	149,607,663	.....	161,442,000	.....	.....	161,442,000	2,901,626	313,951,289	161,442,000
Feb.....	.....	141,933,923	.....	141,933,923	.....	152,519,400	.....	.....	152,519,400	2,037,308	296,490,631	152,519,400
March...	64,907,008	91,491,704	.....	91,491,704	64,907,008	97,111,800	.....	.....	97,111,800	2,143,302	255,653,814	162,018,808
April ...	67,351,680	70,104,135	.....	70,104,135	67,351,680	77,637,600	.....	.....	77,637,600	2,599,954	217,693,369	144,989,280
May	62,177,280	128,319,057	.....	128,319,057	62,177,280	141,408,360	808,480	.....	142,216,840	3,160,528	335,873,705	204,394,120
June.....	70,981,632	99,478,676	.....	99,478,676	70,981,632	.....	43,347,300	65,781,927	109,129,227	4,012,400	283,601,935	180,110,859
July	51,510,528	151,955,393	.....	151,955,393	51,510,528	76,109,040	51,481,080	36,047,439	163,637,559	14,395,136	381,498,616	215,148,087
August..	352,768	147,984,907	.....	147,984,907	352,768	12,602,880	.....	145,806,533	158,409,413	14,178,864	320,925,952	158,762,181
Sept	37,334,976	106,691,798	.....	106,691,798	37,334,976	.....	.....	110,429,178	110,429,178	12,992,000	267,447,952	147,764,154
Oct .....	.....	134,490,946	.....	134,490,946	.....	.....	490,730	137,786,465	138,277,195	15,607,704	288,375,845	138,277,195
Nov.....	.....	124,292,735	.....	124,292,735	.....	.....	.....	127,667,619	127,667,619	2,674,210	254,634,564	127,667,619
Dec.....	.....	125,668,082	.....	125,668,082	.....	.....	.....	129,473,314	129,473,314	3,285,114	258,426,510	129,473,314
Totals.	354,615,872	1,472,019,019	.....	1,472,019,019	354,615,872	718,831,080	96,127,590	752,992,475	1,567,951,145	79,988,146	3,474,574,182	1,922,567,017

TABLE SHOWING SOURCE OF SUPPLY, QUANTITY PUMPED AND COST OF PUMPING AT THE SEVERAL STATIONS DURING THE YEAR 1911.

	SOURCE OF SUPPLY—WELL WATER				COST	
	351 Driven Wells at Pawtucket Boulevard	210 Driven Wells in Valley of River Meadow Brook	Distributing Mains of Low Service System	Totals in U. S. Gallons	Totals	Per Million Gallons
PUMPING STATIONS						
West Sixth Street—Low Service	1,567,951,145	.....	.....	1,567,951,145	\$14,206.43	\$ 9.06+
—High Service .....	.....	.....	79,988,146	79,988,146	1,185.97	14.83—
Cook Wells.....	.....	354,615,872	.....	354,615,872	6,264.36	17.66+
*Lower Boulevard.....	1,472,019,019	.....	.....	1,472,019,019	12,049.04	8.19—
Total Pumpage.....	.....	.....	.....	3,474,574,182	\$33,705.80	\$ 9.70+
Deduct Quantity { at Lower Boulevard.....	1,472,019,019	.....	.....	.....	.....	.....
{ by High Service.....	.....	.....	79,988,146	1,552,007,165	.....	.....
Net Pumpage .....	.....	.....	.....	1,922,567,017	\$33,705.80	\$17.53+
Cost exclusive of High Service.....	.....	.....	.....	1,922,567,017	32,519.83	16.91+
Cost exclusive of High Service and Cook Wells	.....	.....	.....	1,567,951,145	26,255.47	16.74+
Total Cost of High Service Pumpage.....	.....	.....	.....	79,988,146	2,525.23	31.57

*Repumped at West Sixth Street Station.

The following tables, showing the performance of the engines, depth and quantity of water in the Beacon Street Reservoir, average temperature of the air and water at the Beacon Street Reservoir, and the average monthly and daily consumption of water, have been calculated and compiled from the records kept by the engineers and gatekeeper.

TABLE SHOWING WORK DONE WITH WORTHINGTON HIGH DUTY ENGINE, AT
WEST SIXTH STREET PUMPING STATION, FOR EACH MONTH
DURING THE YEAR 1911.

MONTHS	No. of days pumping	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month	Average No. of strokes made per minute	Average head, including friction, in feet	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons pumped to reservoir per lb. total coal consumed	Duty in lbs. with 100 lbs. coal used in pumping only; no deduction for ashes or clinkers	Duty on total coal consumed; no deduction for ashes or clinkers
January.....	31	22-07	685-45	448,450	10.90	164.13	161,442,000	5,207,806	633	86,632,353	66,457,167
February.....	28	24-00	672-00	423,665	10.51	164.23	152,519,400	5,447,121	569	77,879,091	62,199,057
March.....	26	16-01	416-15	269,755	10.80	163.73	97,111,800	3,735,069	554	75,617,724	52,890,927
April.....	18	17-42	318-45	215,660	11.28	163.51	77,637,600	4,313,200	545	74,335,102	48,803,719
May.....	30	19-05	572-30	392,801	11.44	163.45	141,408,360	4,713,612	744	101,437,874	71,899,617
June.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
July.....	15	21-12	318-00	211,414	11.08	163.19	76,109,040	5,073,936	740	100,688,909	74,161,379
August.....	3	16-30	49-30	35,008	11.79	163.73	12,602,880	4,200,960	589	80,457,667	66,817,492
September.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
October.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals and Averages....	151	20-05	8,032-45	1,996,753	10.97	163.77	718,831,080	4,760,471	622	84,974,519	62,552,579

TABLE SHOWING WORK DONE WITH WORTHINGTON DUPLEX ENGINE, AT
WEST SIXTH STREET PUMPING STATION, FOR EACH MONTH
DURING THE YEAR 1911.

MONTHS	No. of days pump- ing	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month	Average No. of strokes made per minute	Average head, including friction, in feet	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons of water pumped in- to reservoir per lb total coal consumed	Duty in lbs. 1 foot high with 100 lbs. coal used in pumping only; no deduction for ashes or clinkers	Duty on total coal consumed; no deduction for ashes or clinkers
January.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
May.....	1	5-00	5-00	2,608	8.69	161.70	808,480	808,480	415	56,047.818	56,047.818
June.....	16	12-56	207-00	139,830	11.26	162.24	43,347,300	2,709,206	402	54,419.038	43,039.752
July.....	17	14-43	250-15	166,068	11.06	162.20	51,481,080	3,028,299	451	61,033.944	59,937.528
August.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
September.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
October.....	1	2-45	245-00	1,583	9.59	161.50	490,730	490,730	432	58,204.827	58,204.827
November.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals and Averages....	35	13-17	465-00	310,089	11.11	162.18	96,127,590	2,746,508	427	57,796.573	50,879.624

TABLE SHOWING WORK DONE WITH ALLIS-CHALMERS ENGINE, AT WEST SIXTH STREET PUMPING STATION, FOR EACH MONTH DURING THE YEAR 1911.

MONTHS	No. of days pumping	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month	Average No. of strokes made per minute	Average head, including friction, in feet	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons of water pumped to reservoir per lb. total coal consumed	Duty in lbs. 1 foot high coal used in pumping only; no deduction for ashes or clinkers	Duty on total coal consumed; no deduction for ashes or clinkers
January.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
May.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
June.....	22	11-13	246-45	471,116	31.82	166.36	65,781,927	2,990,088	878	121,853,893	75,084,052
July.....	16	8-46	140-15	258,164	30.68	166.80	36,047,439	2,252,965	1,138	158,421,131	75,447,140
August.....	30	19-53	596-30	1,044,235	29.18	165.91	145,806,533	4,860,218	1,219	168,609,183	105,063,341
September.....	26	19-30	507-00	790,870	26.00	165.28	110,429,178	4,247,276	1,158	159,656,765	90,222,667
October.....	31	21-01	651-30	986,797	25.24	165.60	137,786,465	4,444,725	1,129	155,996,690	95,858,733
November.....	30	20-16	608-00	914,328	25.06	165.61	127,667,619	4,255,587	979	135,204,829	85,779,200
December.....	31	19-59	619-30	927,260	24.95	165.65	129,473,314	4,176,559	927	128,069,145	78,697,091
Totals and Averages....	186	18-07	3,369-30	5,392,770	26.67	165.81	752,992,475	4,048,347	1,055	145,914,040	88,233,740

TABLE SHOWING WORK DONE WITH WORTHINGTON HIGH SERVICE ENGINE, AT
WEST SIXTH STREET PUMPING STATION, FOR EACH MONTH
DURING THE YEAR 1911.

MONTHS	No. of days pumping	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month	Average No. of strokes made per minute	Average head, including friction, in feet	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons of water pumped to reservoir per lb. total coal consumed	Coal (in pounds) used when pumping
January.....	10	14-36	146-00	207,259	23.66	70.28	2,901,626	290,163	251	11,556
February.....	7	14-56	104-30	145,522	23.21	70.28	2,037,308	291,044	250	8,148
March.....	8	13-52	111-00	153,093	22.99	70.28	2,143,302	267,913	250	8,571
April	9	14-37	131-30	185,711	23.54	70.28	2,599,954	288,884	250	10,398
May.....	10	14-03	140-30	225,752	26.78	70.28	3,160,528	316,053	250	12,643
June.....	15	14-24	216-00	286,600	22.11	70.28	4,012,400	267,493	249	16,095
July.....	31	24-00	744-00	1,028,224	23.03	116.47	14,395,136	464,359	263	54,780
August.....	31	24-00	744-00	1,012,776	22.69	116.47	14,178,864	457,383	249	56,906
September.....	30	24-00	720-00	928,000	21.48	116.47	12,992,000	433,067	250	52,052
October.....	30	23-00	690-00	1,114,836	26.93	102.62	15,607,704	520,257	250	62,314
November.....	9	14-47	133-00	191,015	23.94	70.28	2,674,210	297,134	250	10,696
December.....	10	17-00	170-00	234,651	23.00	70.28	3,285,114	328,511	258	12,743
Totals and Averages....	200	20-15	4050-30	5,713,439	23.51	96.38	79,988,146	399,941	252	316,902

TABLE SHOWING WORK DONE WITH HOLLY HIGH DUTY ENGINE (CRANK AND FLY WHEEL) AT LOWER BOULEVARD PUMPING STATION, FOR EACH MONTH DURING THE YEAR 1911.

MONTHS	No. of days pumping	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month	Average No. of strokes made per minute	Average head, including friction, in feet	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons of water pumped to conduct per lb. total coal consumed	Duty in lbs. 1 foot high coal used in pumping only; no deduction for ashes or clinkers	Duty on total coal consumed; no deduction for ashes or clinkers
January.....	31	22-02	688-00	988,684	24.13	50.36	149,607,663	4,826,054	1,198	50,316,744	50,316,744
February.....	28	23-54	669-00	937,972	23.37	46.90	141,933,923	5,069,069	1,176	45,997,053	45,997,053
March.....	26	20-38	536-30	604,624	18.78	48.03	91,491,704	3,518,912	965	38,687,304	35,616,680
April	18	17-24	313-15	463,284	24.65	51.28	70,104,135	3,894,674	1,320	56,483,197	44,738,330
May.....	30	19-02	571-00	847,998	24.75	49.74	128,319,057	4,277,302	1,192	49,479,602	49,008,284
June.....	29	18-02	522-45	657,406	20.96	48.36	99,478,676	3,430,299	994	40,087,102	40,087,102
July.....	31	23-11	718-55	1,004,199	23.28	52.37	151,955,393	4,901,787	1,177	51,407,905	51,407,905
August.....	31	21-11	656-50	977,960	24.82	59.42	147,984,907	4,773,707	1,255	62,221,429	62,221,429
September.....	26	19-42	512-20	705,074	22.94	52.38	106,691,798	4,103,531	1,292	56,450,130	56,450,130
October.....	31	21-21	662-00	888,785	22.38	50.57	134,490,946	4,338,418	1,176	49,632,609	49,632,609
November.....	30	20-38	619-10	821,390	22.11	52.91	124,292,735	4,143,091	1,148	50,665,151	50,665,151
December	31	20-24	632-15	830,479	21.89	55.33	125,668,082	4,053,809	1,117	51,562,750	51,562,750
Totals and Averages . .	342	20-45	7,097-00	9,727,855	22.85	51.57	1,472,019,019	4,304,149	1,163	50,024,632	49,126,534

TABLE SHOWING WORK DONE WITH DEANE ENGINES AT COOK WELLS PUMPING
STATION FOR EACH MONTH DURING THE YEAR 1911.

MONTHS	No. of days pumping	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month	Average No. of strokes made per minute	Average head, including friction, in feet	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons of water pumped to distributing mains per lb. total coal consumed	Duty in lbs. 1 ft. high with 100 lbs. total coal used. No deduction in lb. total coal for ashes or clinkers
January.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March.....	23	22-43	1,044-30	1,014,172	16.18	178.81	64,907,008	2,822,044	232	34,595,389
April.....	24	23-16	1,117-00	1,052,370	15.70	178.41	67,351,680	2,806,320	236	35,074,960
May.....	25	23-08	1,157-00	971,520	13.99	173.47	62,177,280	2,487,091	225	32,632,248
June.....	30	21-44	1,304-00	1,109,088	14.18	173.70	70,981,632	2,366,054	236	34,156,291
July.....	25	22-42	1,135-00	804,852	11.82	173.70	51,510,528	2,060,421	220	31,853,197
August.....	1	4-00	8-00	5,512	11.48	172.72	352,768	352,768	31	4,420,344
September.....	11	22-19	491-00	583,359	19.80	197.20	37,334,976	3,394,089	238	39,091,820
October.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals and Averages....	139	22-30	6,256-30	5,540,873	14.76	177.17	354,615,872	2,551,193	229	33,913,352

TABLE SHOWING AMOUNT OF COAL USED FOR
 WORTHINGTON HIGH DUTY ENGINE AT
 PUMPING STATION, WEST SIXTH STREET,
 DURING THE YEAR 1911.

MONTHS	COAL CONSUMED			
	For starting fires, in pounds	When pumping, in pounds	For banking fires, in pounds	Total per month, in pounds
January .....	.....	255,180	.....	255,180
February	4,017	264,319	.....	268,336
March	6,200	159,128	10,100	175,428
April	6,570	118,507	17,400	142,477
May	5,580	180,020	4,500	190,100
June .....	.....	.....	.....	.....
July .....	.....	101,227	1,686	102,913
August .....	.....	21,397	.....	21,397
September .....	.....	.....	.....	.....
October .....	.....	.....	.....	.....
November .....	.....	.....	.....	.....
December .....	.....	.....	.....	.....
Totals	22,367	1,099,778	33,686	1,155,831

TABLE SHOWING AMOUNT OF COAL USED FOR
 WORTHINGTON DUPLEX ENGINE AT PUMPING
 STATION, WEST SIXTH STREET,
 DURING THE YEAR 1911.

MONTHS	COAL CONSUMED			
	For starting fires, in pounds	When pumping, in pounds	For banking fires, in pounds	Total per month, in pounds
January				
February				
March				
April				
May		1,946		1,946
June	800	105,418	1,600	107,818
July		114,143		114,143
August,				
September				
October		1,136		1,136
November				
December				
Totals	800	222,643	1,600	225,043

TABLE SHOWING AMOUNT OF COAL USED FOR
ALLIS-CHALMERS ENGINE AT PUMPING
STATION, WEST SIXTH STREET,
DURING THE YEAR 1911.

MONTHS	COAL CONSUMED			
	For starting fires, in pounds	When pumping, in pounds	For banking fires, in pounds	Total per month, in pounds
January				
February				
March				
April				
May				
June	2,400	66,127	6,400	74,927
July		31,665		31,665
August		119,699		119,699
September		95,376		95,376
October	2,150	119,882		122,032
November	4,400	121,666	4,400	130,466
December	7,604	127,863	4,250	139,717
Totals	16,554	682,278	15,050	713,882

TABLE SHOWING AMOUNT OF COAL USED FOR
DEANE ENGINES AT PUMPING STATION,
COOK WELLS, DURING THE YEAR 1911.

MONTHS	COAL CONSUMED			
	For starting fires, in pounds	When pumping, in pounds	For banking fires, in pounds	Total per month, in pounds
January
February
March	279,890	.....	279,890
April	285,820	.....	285,820
May	275,760	.....	275,760
June	301,160	.....	301,160
July	234,350	.....	234,350
August.....	11,500	.....	11,500
September	157,130	.....	157,130
October
November
December
Totals	1,545,610	.....	1,545,610

TABLE SHOWING AMOUNT OF COAL USED FOR
HOLLY ENGINE AT PUMPING STATION, LOWER
BOULEVARD, DURING THE YEAR 1911.

MONTHS	COAL CONSUMED			
	For starting fires, in pounds	When pumping, in pounds	For banking fires, in pounds	Total per month, in pounds
January		124,925		124,925
February ..		120,740		120,740
March		94,765		94,765
April		53,100		53,100
May		107,620		107,620
June		100,123		100,123
July		129,149		129,149
August.....		117,905		117,905
September		82,595		82,595
October		114,325		114,325
November		108,292		108,292
December		112,505		112,505
Totals		1,266,044		1,266,044

WEST SIXTH STREET PUMPING STATION,
WORTHINGTON HIGH DUTY ENGINE, RUN-
NING EXPENSES FOR THE YEAR 1911.

Pay of Engineers and Firemen.....	\$4,113.00
14 1682-2000 tons of coal (New River, 1910) at \$4.330 +	64.27
10 203-2000 tons of coal (New River, 1911), at \$4.330 +	43.74
9 1846-2000 tons of coal (New River, 1911), at \$4.330 +	42.97
77 771-2000 tons of coal (New River, 1911), at \$4.357 +	337.18
56 1246-2000 tons of coal (New River, 1911), at \$4.357 +	246.72
62 1873-2000 tons of coal (New River, 1911), at \$3 979 +. ...	2504.5
167 1667-2000 tons of coal (New River, 1911), at \$4.152— ..	696.81
105 965-2000 tons of coal (New River, 1911), at \$4.129—... ..	435.50
73 234-2000 tons of coal (New River, 1911), at \$3.737—.....	273.21
Testing of coal and oil.....	17.78
288 43-100 gallons of cylinder oil, at \$0.358	103.03
133 79-100 gallons of engine oil, at \$0.275.	36.80
89 69-100 pounds of packing, at \$1.199.....	107.53
177 45-100 pounds of cotton waste, at \$0.10.	17.75
5 pounds grease, at \$0.15.....	.75
Repairs on engine... ..	84.50
Repairs on boilers... ..	67.62
Sundries.....	80.09
 Total	 \$7,019 70

Cost of pumping water into reservoir per million gallons, \$9.77—

Cost of pumping water one foot high per million gallons, \$0.05 96-100 +

WEST SIXTH STREET PUMPING STATION
 WORTHINGTON DUPLEX ENGINE
 RUNNING EXPENSES FOR THE YEAR 1911.

Pay of Engineers and Firemen.....	\$ 547.14
2 1800-2000 tons of coal (New River, 1910, at \$4.330+.....	12.56
1 1948-2000 tons of coal (New River, 1911), at \$4.330+..	8.55
1 1878-2000 tons of coal (New River, 1911), at \$4.330+.....	8.40
15 243-2000 tons of coal (New River, 1911), at \$4.357+.....	65.89
11 129-2000 tons of coal (New River, 1911), at \$4.357+.....	48.21
12 596-2000 tons of coal (New River, 1911), at \$3.979+.....	48.94
32 1590-2000 tons of coal (New River, 1911), at \$4.152—.....	136.16
20 1223-2000 tons of coal (New River, 1911), at \$4.129—.....	85.10
14 574-2000 tons of coal (New River, 1911), at \$3.737—.....	53.39
Testing of coal and oil.....	3.47
38 37-100 gallons of cylinder oil, at \$0.358.....	13.71
17 79-100 gallons of engine oil, at \$0.275.....	4.89
5 37-100 pounds of packing, at \$1.145+.....	6.15
23 61-100 pounds of cotton waste at \$0.10.....	2.36
Repairs on Engine.....	1.50
Repairs on boilers.....	9.00
Sundries.....	10.66
Total	<u>\$1,066.08</u>

Cost of pumping water into reservoir per million gallons \$11.09+

Cost of pumping water one foot high per million gallons \$0.0684—

WEST SIXTH STREET PUMPING STATION
ALLIS-CHALMERS ENGINE
RUNNING EXPENSES FOR THE YEAR 1911.

Pay of Engineers and Firemen.....	\$4,311.11
9 338-2000 tons of coal (New River, 1910), at \$4.330 +	39.71
6 482-2000 tons of coal (New River, 1911), at \$4.330 +	27.03
6 262-2000 tons of coal (New River, 1911), at \$4.330 +	26.55
47 1620-2000 tons of coal (New River, 1911), at \$4.357 +	208.31
34 1965-2000 tons of coal (New River, 1911), at \$4.357 +	152.42
38 1767-2000 tons of coal (New River, 1911), at \$3.979 +	154.73
103 1380-2000 tons of coal (New River, 1911), at \$4.152—.....	430.50
65 337-2000 tons of coal (New River, 1911), at \$4.129—	269.06
45 346-2000 tons of coal (New River, 1911), at \$3.737—.....	168.79
Testing of coal and oil.....	10.98
302 32-100 gallons of cylinder oil, at \$0.358.....	108.00
140 24-100 gallons of engine oil, \$0.275	38.58
186 pounds of cotton waste at \$0.10.....	18.60
Repairs on engine.....	1.45
Repairs on boilers.....	70.88
Sundries.....	83.95
Total	<u>\$6,120.65</u>

Cost of pumping water into reservoir per million gallons \$8.13—

Cost of pumping water one foot high per million gallons \$0.0490

WEST SIXTH STREET PUMPING STATION, HIGH
SERVICE ENGINE, RUNNING EXPENSES
FOR THE YEAR 1911.

Pay of Engineers and Firemen.....	\$462.24
4 103-2000 tons of coal (New River, 1910), at \$4.330+	17.54
2 1515-2000 tons of coal (New River, 1911), at \$4.330+.....	11.94
21 251-2000 tons of coal (New River, 1911), at \$4.357+.....	92.05
2 1418-2000 tons of coal (New River, 1911), at \$4.330+.....	11.72
15 915-2000 tons of coal (New River, 1911), at \$4.357+.....	67.35
17 362-2000 tons of coal (New River, 1911), at \$3.979+.....	68.37
45 1633-2000 tons of coal (New River, 1911) at \$4.152—.....	190.22
28 1591-2000 tons of coal (New River, 1911), at \$4.129—.....	118.88
19 1920-2000 tons of coal (New River, 1911), at \$3.737—.....	74.58
Testing of coal and oil.....	4.85
32 41-100 gallons of cylinder oil, at \$0.358	11.58
15 4-100 gallons of engine oil, at \$0.275	4.14
5 pounds of packing, at \$1.145+.....	5.73
19 94-100 pounds of cotton waste, at \$0.10.....	2.00
Repairs on Engine.....	26.18
Repairs on boilers.....	7.60
Sundries.....	9.00
Total	\$1,185.97

Cost of pumping water into reservoir per million gallons, \$14.83—

Cost of pumping water 1 foot high per million gallons, \$0.15 38-100+

COOK WELLS PUMPING STATION
DEANE ENGINES
RUNNING EXPENSES FOR THE YEAR 1911.

Pay of Engineers and Firemen.....	\$2,520.99
159 760-2000 tons of coal (New River, 1910), at \$3.955+..	630.40
83 1180-2000 tons of coal (New River, 1911), at \$3.946+.....	329.88
362 490-2000 tons of coal (New River, 1911), at \$3.884—..	1,406.93
167 1180-2000 tons of coal (New River, 1911), at \$3.946+.....	661.39
Testing of coal and oil.....	34.57
150 gallons of kerosene oil at \$0.088+.....	13.25
Electric lighting of works.....	59.05
101 60-100 gallons of cylinder oil, at \$0.372+.....	37.82
5 gallons of engine oil, at \$0.35.....	1.75
72 25-100 pounds of packing, at 1.046—.....	75.55
58 pounds of cotton waste, at \$0.10.....	5.80
10 pounds of tallow, at \$0.0675... ..	.67
Repairs on engines	195.30
Repairs on boilers	261.83
Sundries.....	29.16
Total	<u>\$6,264.36</u>

Cost of pumping water into distributing mains per million gallons.....	\$17.66+
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LOWER BOULEVARD PUMPING STATION, HOLLY
ENGINE, RUNNING EXPENSES FOR
THE YEAR 1911.

Pay of Engineers and Firemen.....	\$8,743.54
633 44-2000 tons of coal (Pocahontas and New River, 1910) at \$4.269+	2,751.90
Testing of oil.....	6.70
250 gallons of kerosene oil, at \$0.073.....	18.25
452 65-100 gallons of cylinder oil, at \$0.371+.....	167.97
351 17-100 gallons of engine oil, at \$0.199—.....	69.74
25 12-100 pounds of packing, at \$1.212+.....	30.46
159 pounds of cotton waste, at \$0.10.....	15.90
Repairs on engine.....	109.26
Repairs on boilers.....	35.70
Sundries.....	99.62
Total	\$12,049.04

Cost of pumping water into conduit per million gallons, \$8.19—

RESERVOIR, BEACON STREET, 1911.

MONTHS	Depth in Feet	Quantity in U. S. Gallons	Temperature in Degrees	
			Of Water	Of Air
January	19.87	30,299,185	56.55	31.83
February	19.47	29,617,294	49.93	25.25
March	19.12	29,034,866	46.00	34.48
April	18.32	27,700,536	.....	47.18
May	18.21	27,528,115	45.23	65.17
June	19.33	29,389,324	47.20	67.70
July	18.29	27,648,101	50.81	78.89
August.....	19.52	29,704,095	55.98	69.87
September	19.42	29,538,922	60.80	62.82
October	19.75	30,099,592	61.16	51.28
November	19.34	29,410,292	58.20	39.39
December	19.45	29,586,505	58.32	35.90

The following table shows the average daily consumption of water, in gallons, for each month and each year since the installation of the system.

AVERAGE DAILY CONSUMPTION OF WATER IN GALLONS FOR EACH MONTH AND YEAR FROM JANUARY, 1873, TO DECEMBER, 1911, INCLUSIVE.

YEARS	MONTHS												For the Year
	January	February	March	April	May	June	July	August	September	October	November	December	
1873	308.777	373.437	327.321	356.148	430.301	569.770	886.215	588.634	571.621	531.022	480.646	591.202	511.462
1874	633.810	667.770	638.840	609.470	708.760	919.830	977.360	895.820	880.880	760.560	750.060	890.220	789.206
1875	1,211.480	1,377.830	1,092.070	920.810	1,061.770	1,314.750	1,389.560	1,260.070	1,248.470	1,117.250	1,130.260	1,549.500	1,222.300
1876	1,484.980	1,527.830	1,325.790	1,073.602	1,275.180	1,554.764	2,011.640	1,662.020	1,539.326	1,348.380	1,193.376	1,805.810	1,484.882
1877	1,993.090	1,616.882	1,443.180	1,291.636	1,455.870	1,780.113	2,167.740	1,758.760	1,906.975	1,501.890	1,496.773	1,560.420	1,631.360
1878	2,038.990	1,894.890	1,683.690	1,287.310	1,824.140	1,760.330	2,262.500	1,813.970	1,878.048	1,643.400	1,515.424	1,804.850	1,784.960
1879	2,407.950	2,241.030	1,921.940	1,716.990	2,020.250	1,991.590	2,133.170	2,050.340	1,908.050	1,950.330	1,756.600	2,178.000	2,023.200
1880	1,977.760	2,144.660	1,933.610	1,839.800	2,223.670	2,486.780	2,438.080	2,492.330	2,108.940	2,268.430	2,229.350	2,574.600	2,252.197
1881	3,151.280	3,054.550	2,245.410	2,222.330	2,223.590	2,281.370	2,383.280	2,472.830	2,350.290	2,205.760	2,082.790	2,158.930	2,299.168
1882	2,883.560	2,809.540	2,263.290	2,163.990	2,203.580	2,774.220	3,220.640	3,220.680	2,651.590	2,434.430	2,211.800	2,629.940	2,622.615
1883	3,341.650	3,063.900	2,893.330	2,436.600	2,730.670	2,907.920	2,988.780	3,220.780	2,910.440	2,408.160	2,374.830	3,063.920	2,862.710
1884	3,600.150	3,032.120	3,025.910	2,513.700	2,620.820	3,127.330	3,185.420	3,166.500	3,111.910	2,806.130	2,648.010	3,334.160	3,016.040
1885	4,137.730	4,924.980	3,907.890	3,103.350	2,996.500	3,443.140	3,545.920	3,303.190	3,243.620	3,567.880	3,125.447	3,547.620	3,563.220
1886	4,527.610	4,927.900	4,213.570	3,490.590	3,416.380	3,903.860	4,084.170	3,922.610	3,693.650	3,440.450	3,516.680	4,408.650	3,957.650
1887	5,470.290	4,762.659	4,276.024	3,707.956	4,222.327	4,300.546	4,522.064	4,320.440	4,200.049	3,894.148	3,672.885	4,480.818	4,319.164
1888	6,611.570	6,707.985	5,305.426	4,213.317	4,241.156	4,836.489	4,868.093	4,646.338	4,367.616	4,378.843	4,512.348	5,131.297	4,981.118
1889	4,889.917	5,495.132	4,344.194	4,139.759	4,516.328	4,738.913	4,919.008	4,769.079	4,668.705	4,349.478	4,266.827	4,560.882	4,633.165
1890	5,034.449	5,317.487	5,037.524	4,697.240	4,692.172	5,234.919	6,101.724	5,533.936	5,671.520	5,380.569	5,074.790	5,823.698	5,373.536
1891	6,346.284	6,049.030	5,668.225	5,292.180	5,530.909	6,076.131	6,742.737	6,460.251	6,179.573	5,747.054	5,661.719	5,919.692	5,919.692
1892	5,911.281	6,614.450	6,023.591	5,340.879	5,241.053	6,371.317	6,796.550	6,746.621	6,194.761	6,415.510	5,613.792	5,999.565	6,074.263
1893	8,659.870	8,838.586	6,998.144	5,646.919	5,910.870	6,330.711	7,104.433	6,371.033	6,190.377	5,821.950	5,909.004	7,325.056	6,816.943
1894	7,268.744	7,817.660	6,580.717	6,034.913	6,432.212	6,935.305	7,032.587	6,467.698	6,193.377	5,747.054	5,661.719	6,568.170	6,568.170
1895	7,230.484	8,313.300	6,469.630	6,048.913	6,154.297	6,915.305	7,104.433	6,371.033	6,190.377	5,821.950	5,909.004	6,550.504	6,550.504
1896	8,347.435	7,050.337	6,645.162	6,187.508	7,034.685	6,296.706	7,407.605	7,058.722	6,197.896	5,970.660	5,956.262	7,119.614	6,922.092
1897	7,422.486	7,050.337	6,498.264	6,187.508	6,401.053	6,296.706	6,885.239	6,353.958	6,348.176	6,301.085	6,499.027	6,933.308	6,933.308
1898	7,769.816	7,244.795	6,232.698	6,202.828	6,395.113	6,612.048	7,143.829	6,970.647	6,743.119	6,300.619	6,128.699	6,965.948	6,594.364
1899	7,417.719	8,114.248	6,803.182	6,554.968	6,551.731	8,508.104	8,664.229	7,196.128	7,002.017	7,037.015	6,797.952	7,286.205	7,286.205
1900	7,511.163	8,127.419	8,024.115	7,665.883	7,734.911	8,037.993	8,696.110	8,268.526	8,138.836	7,386.297	7,292.997	7,844.543	7,893.356
1901	8,266.601	9,055.112	8,260.895	6,914.032	6,580.172	7,083.342	7,263.332	6,766.762	6,514.839	6,183.286	5,748.730	6,197.726	7,059.631
1902	6,171.220	6,114.804	5,651.749	5,446.046	5,797.401	6,217.117	6,083.104	5,963.910	5,461.552	5,107.818	4,771.331	5,969.016	5,729.325
1903	6,160.966	6,054.616	5,115.198	5,147.423	5,581.932	5,124.402	5,563.775	5,018.208	4,936.025	4,809.428	4,613.355	5,112.584	5,266.823
1904	6,655.276	7,188.622	5,554.904	4,791.851	5,220.707	5,562.331	5,576.895	5,136.152	5,417.024	4,940.185	4,580.887	5,257.670	5,485.923

AVERAGE DAILY CONSUMPTION OF WATER IN GALLONS, FOR EACH MONTH AND YEAR
FROM JANUARY, 1873 TO DECEMBER 1911, INCLUSIVE—Continued

YEAR	MONTHS												For the Year
	January	February	March	April	May	June	July	August	September	October	November	December	
1905	5,777,996	6,857,608	5,525,104	5,316,825	5,283,217	5,152,313	5,555,262	5,819,160	5,025,355	5,447,880	4,983,105	5,034,701	5,474,202
1906	4,834,565	5,142,265	5,001,817	4,950,731	5,025,778	5,074,773	5,391,923	5,440,761	5,486,986	4,980,724	4,398,655	5,269,259	5,083,856
1907	5,812,515	6,967,163	5,996,990	5,089,614	5,485,391	5,640,334	5,674,592	6,046,145	5,414,610	5,198,286	4,492,525	4,587,374	5,526,118
1908	4,892,197	6,303,981	5,126,110	4,847,459	4,879,046	5,597,233	6,130,861	5,027,742	5,420,566	5,647,718	4,574,252	4,607,084	5,250,367
1909	4,994,704	5,025,674	4,781,957	4,846,081	4,947,820	5,504,361	6,114,545	6,167,967	5,470,110	5,137,479	4,863,788	5,000,414	5,240,385
1910	5,527,751	5,580,827	5,110,820	5,144,907	5,188,944	5,317,145	6,521,061	6,087,138	5,563,421	5,234,485	4,787,436	5,234,080	5,442,967
1911	5,257,816	5,432,082	5,298,391	5,246,301	6,134,973	6,040,921	6,917,779	5,103,294	4,920,793	4,428,730	4,246,149	4,240,112	5,272,705

SUMMARY OF STATISTICS

FOR THE YEAR ENDING DECEMBER 31, 1911.

In form recommended by the New England Water Works
Association.

LOWELL WATER WORKS.

LOWELL, MIDDLESEX COUNTY, MASSACHUSETTS.

GENERAL STATISTICS.

Population by census of 1910, 106,294.

Date of construction, 1870 to 1873.

Date of construction, High Service, 1881.

Date of construction, Driven Wells, 1893 to 1903.

By whom owned: The City of Lowell.

Source of Supply: Two hundred ten (210) driven wells
in the valley of River Meadow Brook, and three hun-
dred fifty one (351) driven wells at Pawtucket Boulevard.

Mode of supply: Pumping to reservoir and pumping direct.

PUMPING STATISTICS.

1. Builders of Pumping Machinery.

AT WEST SIXTH STREET STATION.

One engine, capacity 5,000,000 gals. in 24 hours, Henry
R. Worthington.

One engine, capacity 500,000 gals. in 24 hours, Henry
R. Worthington.

One engine, capacity 10,000,000 gals. in 24 hours, Henry R. Worthington.

*One engine, capacity 8,000,000 gals. in 24 hours, Allis-Chalmers Co.

AT COOK WELLS STATION, TEMPORARY PUMPS.

One engine, capacity 3,000,000 gals. in 24 hours, The Deane Steam Pump Co.

One engine, capacity 3,000,000 gals. in 24 hours, The Deane Steam Pump Co.

AT LOWER BOULEVARD STATION.

One engine, capacity 3,000,000 gals. in 24 hours, Knowles Steam Pump Works.

One engine, capacity 8,000,000 gals. in 24 hours, The Holly Manufacturing Co.

AT UPPER BOULEVARD STATION, TEMPORARY PUMPS.

One engine, capacity 3,000,000 gals. in 24 hours, Henry R. Worthington.

One engine, capacity 3,000,000 gals. in 24 hours, Henry R. Worthington.

2. Description of fuel used: {
- a.* Kind, bituminous.
 - b.* Brand of coal: New River and Pocahontas.
 - c.* Average price of coal per gross ton delivered, \$4.53+
 - d.* Percentage of ash.
 - e.* Wood, price per cord.

3. Coal consumed for the year, 5,223,312 pounds.

*Installed June, 1911.

4. (Pounds of wood) $\div 3$ = equivalent amount of coal = none,
5. Total equivalent coal consumed for the year (3) + (4) 5,223,312 pounds.
6. Total pumpage for the year, 3,474,574,182 gallons.
7. Average static head against which pumps work, 111.78 feet.
8. Average dynamic head against which pumps work, 116.46 feet.
9. Number of gallons pumped per pound of equivalent coal (5), 665.
10. Duty = $\frac{\text{Gallons pumped (6)} \times 8.34 \text{ lbs.} \times 100 \times \text{dynamic head (8)}}{\text{Total fuel consumed (5)}}$
 = 64,609,821.
 Cost of pumping figured on pumping station expenses, viz: \$33,705.80.
11. Per million gallons pumped, \$9.70+
12. Per million gallons raised one foot (dynamic), \$0.0833—

FINANCIAL STATISTICS—1911

RECEIPTS		EXPENDITURES	
Balance from 1910.....	\$ 3,517.63	Water Works Maintenance:	
From Water Rates:		AA Operation (Management and Repairs).....	\$144,015.93
A Fixture Rates	\$ 17,591.12	CC Total Maintenance.....	\$144,015.93
B Meter Rates	176,726.60	DD Interest.....	46,314.12
C Total from Consumers.....	194,317.72	(CC + DD).....	191,100.99
F For Street Watering.....	1,800.00	EE Payment of Loans.....	8,700.00
G For Public Buildings.....	4,007.45	FF Sinking Funds.....	16,000.00
J Total from Municipal Depts.	5,807.45	Water Works Construction:	
K From Tax Levy.....	16,000.00	GG Extension of Mains.....	19,199.54
M From Other Sources	23,578.81	HH Extension of Services.....	6,550.43
Overdraw	1,967.69	KK Total Construction.....	25,749.97
		LL Unclassified Expenses....	4,409.28
N. Total	\$245,189.30	N. Total.....	\$245,189.30

O	Net Cost of Works to date	\$3,198,505.50
P	Bonded Debt at Date.....	1,167,500.00
Q	Value of Sinking Fund to Date	582,354.61
R	Average Rate of Interest, four per cent.	

STATISTICS OF CONSUMPTION OF WATER.

1. Estimated total population at date, 106,294.
2. Estimated population on lines of pipe, 106,294.
3. Estimated population supplied, 106,294.
4. Total consumption for the year, 1,924,537,162 gallons.
5. Passed through meters, 1,071,332,137 gallons.
6. Percentage of consumption metered, 55.67.
7. Average daily consumption of water, 5,272,705 gallons.
8. Gallons per day to each inhabitant, 49.60.
9. Gallons per day to each consumer, 49.60.
10. Gallons per day to each tap, 415.
11. Cost of supplying water, per million gallons, figured on total maintenance (item CC), \$75.21.
12. Total cost of supplying water, per million gallons, figured on total maintenance and interest on bonds, \$99.27.

STATISTICS RELATING TO DISTRIBUTION
SYSTEM

MAINS.

1. Kind of pipe, cast iron.
2. Sizes, 4 inches to 30 inches.
3. Extended 25,467 feet during the year.
4. Removed 7,285 feet during the year.
5. Total now in use, 148.75 miles.
6. Cost of repairs per mile, none.
7. Number of leaks per mile, none.
8. Length of pipe less than 4 inches in diameter, 2 miles, more or less.
9. Number of hydrants added during the year (public and private), 30.
10. Number of hydrants (public and private) now in use, 1370.
11. Number of stop gates added during the year, 50.
12. Number of stop gates now in use, 1671.
13. Number of stop gates smaller than 4 inches, 32.
14. Number of blow-offs, 34.
15. Range of pressure on mains, 17 lbs. to 72 lbs.

LOW SERVICE.

SERVICES.

16. Kind of pipe, lead, lead-lined iron, iron and tin-lined iron.
17. Sizes, $\frac{5}{8}$ " to 2".
18. Extended, 10,549 feet.
20. Total now in use, 95.65 miles.
21. Number of service taps added during the year, 255.
22. Number now in use, 12,719.

23. Average length of service 41.37 feet.
24. Average cost of service, \$25.69.
25. Number of meters added, 385.
26. Number now in use, 10,215.
27. Percentage of services metered, 80.31.
28. Percentage of receipts from metered water ($B \div C$)
90.95.

The State Board of Health has made analyses of water each month from the Merrimack river (for record only), wells at Pawtucket Boulevard and Low Service Reservoir, a record of which is annexed.

Respectfully submitted,

STEPHEN KEARNEY,

City Engineer.

COMMONWEALTH OF MASSACHUSETTS—STATE BOARD OF HEALTH.

LOWELL WATER ANALYSES—MERRIMACK RIVER—(Parts in 100,000.)

No.	Date of		Appearance			Odor		Residue on Evaporation			Ammonia				Nitrogen as		Hardness	Iron	Oxygen Consumed	
	Collection	Examination	Turbidity	Sediment	Color	Cold	Hot	Total	Loss on Ignition	Fixed	Free	Albuminoid			Chlorine	Nitrates				Nitrites
												In solution	In suspension							
90.442	1911 January 19	20	slight	slight	.31	faintly unpleasant	distinctly unpleasant, tarry	5.80	2.15	3.65	.0164	.0206	.0160	.0046	.0100	.0001	1.3	.0240	.67	
90.961	February 15	16	slight	slight	.25	v. faintly veg. and unpleasant	faintly veg. and unpleasant	6.45	2.30	4.15	.0280	.0240	.0182	.0058	.0080	.0002	2.0	.0310	.65	
91.571	March 22	23	decided	cons.	.35	faintly unpleasant	distinctly unpleasant	5.00	2.25	2.75	.0076	.0222	.0156	.0066	.0050	.0002	2.0	.0300	.86	
92.048	April 18	20	slight	cons.	.38	faintly unpleasant	distinctly unpleasant	3.00	1.40	1.60	.0128	.0252	.0170	.0082	.0050	.0001	0.8	.0540	.24	
92.565	May 16	18	v. slight	slight	.45	v. faintly veg. and unpleasant	faintly veg. and unpleasant	3.15	1.40	1.75	.0140	.0152	.0116	.0036	.0030	.0002	0.8	.0490	.66	
93.192	June 20	21	slight	slight	.44	distinctly veg. and faintly unpleasant	distinctly veg. and faintly unpleasant	4.45	2.10	2.35	.0110	.0212	.0162	.0050	.0010	.0002	1.3	.0510	.87	
93.920	July 19	20	slight	slight	.40	faintly vegetable	faintly vegetable	5.80	1.95	3.85	.0336	.0276	.0184	.0092	.0000	.0005	1.7	.0700	.68	
94.530	August 15	16	slight	slight	.28	faintly vegetable	faintly vegetable	5.75	1.85	3.90	.0132	.0200	.0140	.0060	.0040	.0003	1.6	.0450	.43	
95.250	September 19	20	v. slight	slight	.35	distinctly veg. and faintly unpleasant	distinctly veg. and faintly unpleasant	5.60	2.55	3.35	.0154	.0196	.0162	.0034	.0040	.0004	1.7	.0460	.55	
95.862	October 17	19	v. slight	slight	.40	faintly veg and unpleasant	distinctly veg. and unpleasant	5.20	2.40	2.80	.0175	.0225	.0180	.0045	.0050	.0003	1.3	.0250	.75	
96.648	November 22	24	slight	slight	.45	faintly unpleasant and tarry	distinctly unpleasant and tarry	5.10	2.00	3.10	.0092	.0204	.0162	.0042	.0060	.0002	1.7	.0220	.62	
97.184	December 19	20	slight	slight	.40	distinctly veg. and faintly unpleasant	distinctly veg. and faintly unpleasant	4.85	1.80	3.05	.0112	.0188	.0162	.0026	.0060	.0003	1.3	.0250	.71	

COMMONWEALTH OF MASSACHUSETTS—STATE BOARD OF HEALTH
LOWELL WATER ANALYSES—BOULEVARD WELLS—(Parts in 100,000)

No.	Date of		Appearance			Odor		Residue on evaporation			Ammonia				Chlorine		Nitrogen as		Iron	Oxygen Consumed
	Collection	Examination	Turbidity	Sediment	Color	Cold	Hot	Total	Loss on Ignition	Fixed	Free	Total	In Solution	In Suspension			Nitrates	Nitrites		
90,443	January 18	1911	slight iron	cons. iron	.31	none	v. faintly unpleasant	5.80	.....	.....	.0360	.0068	.....	.....	.41	.0080	.0000	.0000	.2700	.....
90,962	February 15		slight iron	cons. iron	fl. .33	none	v. faintly unpleasant	6.10	.....	.....	.0388	.0052	.....	.....	.43	.0090	.0000	.0000	.2400	.....
91,572	March 22		slight iron	slight iron	1.32	none	v. faintly unpleasant	6.70	.....	.....	.0768	.0132	.....	.....	.32	.0010	.0001	.0001	.5600	.....
92,049	April 18		v. slight iron	slight iron	.35	none	v. faintly unpleasant	5.00	.....	.....	.0408	.0052	.....	.....	.42	.0050	.0000	.0000	.1600	.....
92,544	May 16		decided	cons.	fl. .32	none	none	5.90	.....	.....	.0352	.0064	.....	.....	.41	.0080	.0001	.0001	.2200	.....
93,193	June 20		slight	slight	.56	v. faintly unpleasant	v. faintly unpleasant	6.30	.....	.....	.0440	.0060	.....	.....	.36	.0060	.0002	.0002	.2200	.....
93,921	July 19		decided	slight iron	.50	v. faintly unpleasant	faintly unpleasant	8.10	.....	.....	.0352	.0074	.....	.....	.33	.0120	.0001	.0001	.2800	.....
94,531	August 15		decided iron	slight iron	.56	v. faintly unpleasant	v. faintly unpleasant	6.40	.....	.....	.0576	.0060	.....	.....	.39	.0080	.0000	.0000	.2200	.....
95,251	September 19		decided iron	cons. iron	fl. .60	none	v. faintly unpleasant	5.90	.....	.....	.0560	.0090	.....	.....	.40	.0000	.0001	.0001	.3200	.....
95,923	October 18		slight iron	cons. iron	fl. .33	none	none	7.60	.....	.....	.0332	.0096	.....	.....	.42	.0050	.0002	.0002	.1200	.....
96,649	November 22		slight iron	slight iron	.35	none	none	7.20	.....	.....	.0320	.0070	.....	.....	.37	.0080	.0001	.0001	.1100	.....
97,185	December 19		slight iron	slight iron	fl. .30	none	v. faintly unpleasant	6.40	.....	.....	.0320	.0068	.....	.....	.38	.0110	.0002	.0002	.0700	.....

COMMONWEALTH OF MASSACHUSETTS—STATE BOARD OF HEALTH

LOWELL WATER ANALYSES—RESERVOIR—(Parts in 100,000)

No.	Date of		Appearance			Odor		Residue on evaporation			Ammonia			Chlorine	Nitrogen as		Hardness	Iron	Oxygen Consumed	
	Collection	Examination	Turbidity	Sediment	Color	Cold	Hot	Total	Loss on Ignition	Fixed	Free	Aluminoid								
												In Solution	In Suspension							
90,444	1911 January 18	20	decided iron	slight iron	turbid .30	none	v. faintly unpleasant	5.90	.....	....	.0344	.0062	.....	.....	.42	.0090	.0003	2.6	.1200	.....
90,963	February 15	16	decided milky	v. slight iron	turbid .27	none	v. faintly unpleasant	6.20	.....	....	.0352	.0078	.....	.....	.41	.0130	.0001	2.9	.1200	.....
91,573	March 22	24	slight	slight	turbid .28	faintly unpleasant	faintly unpleasant	6.60	.....	....	.0280	.0042	.....	.....	.46	.0200	.0001	2.6	.1200	.....
92,050	April 18	20	slight iron	slight iron	.15	v. faintly unpleasant	faintly unpleasant	6.00	.....	....	.0198	.0064	.....	.....	.45	.0200	.0001	2.9	.0700	.....
92,545	May 16	17	slight	slight	.17	none	none	6.60	.....	....	.0328	.0074	.....	.....	.45	.0150	.0002	2.6	.0460	.....
93,194	June 20	21	v. slight	v. slight	.18	none	none	6.50	.....	....	.0246	.0080	.....	.....	.42	.0170	.0003	2.9	.0520	.....
93,923	July 19	20	slight	slight	.25	none	none	7.50	.....	....	.0336	.0064	.....	.....	.39	.0140	.0002	2.9	.0750	.....
94,532	August 15	16	decided	slight	.30	none	none	7.80	.....	....	.0408	.0088	.....	.....	.40	.0060	.0006	3.0	.0950	.....
95,252	September 19	20	decided iron	slight iron	fil. .35	faintly unpleasant	faintly unpleasant	6.50	.....	....	.0416	.0096	.....	.....	.44	.0100	.0003	2.6	.1000	.....
95,864	October 17	19	slight iron	slight iron	.36	faintly vegetable	distinctly vegetable	6.40	.....	....	.0360	.0074	.....	.....	.45	.0110	.0003	2.6	.0800	.....
96,650	November 22	24	slight iron	slight iron	fil. .33	none	none	5.90	.....	....	.0232	.0072	.....	.....	.40	.0180	.0004	2.7	.0700	.....
97,186	December 19	20	slight iron	slight iron	fil. .32	none	v faintly unpleasant	6.20	.....	....	.0264	.0088	.....	.....	.42	.0220	.0006	3.0	.0800	.....

Superintendent's Report

LOWELL, MASS., January 24, 1912.

MR. ANDREW E. BARRETT,

*Commissioner of Water Works and Fire Protection of the
City of Lowell.*

DEAR SIR: — Following is the annual Report of the Superintendent of Water Works for the year ending December 31, 1911.

In the Superintendent's Report of 1910 it was stated that owing to the low rainfall of the previous three years, the quantity of water available had fallen off considerably. The past year's rainfall of 36.52 being still far below normal, a further reduction in the yield of the driven wells was a natural result. In fact, during the first half of July, with the Boulevard and Cook wells being pumped to the limit, the amount obtained fell short of the consumption. Fear was felt for a time that a curtailment in the use of water might become necessary, but the extreme heat and drought prevailing at that time came to an end about the middle of July causing a material lessening in

the consumption, so that on July 25th, the Cook Wells not being necessary, were shut down. At no time after that did the consumption exceed the pumpage.

The foregoing facts prove conclusively the necessity of increasing the supply. As for the quality of the water, the experience of the water-takers during the months of August and September last, leaves no doubt regarding the need of improvement. While the water furnished was free from disease germs, it was, owing to its high color, unpleasant taste and disagreeable odor, decidedly unfit for domestic use. To prevent a repetition of this trouble the coming summer, a large part, if not the whole of the supply, must be obtained from new wells or some other source other than the present Boulevard Wells. By means of the \$100,000.00 loan voted by the City Council last year upon recommendation of the Water Board, and in accordance with the advice of the State Board of Health, money has been provided for the driving of a large number of new wells on land condemned by the City, opposite the Boulevard Lower Pumping Station, in addition to a new line on land previously owned by the City, running westerly from the Pumping Station, nearer the Boulevard and farther from the river than the present wells.

The location of the new wells has been thoroughly tested, and five hundred (500) feet of 20" flanged suction main has been laid on this line previously mentioned. Plans are made for the laying of three other lines on the ten acres or more acquired by seizure. Nothing can be done to further this work during the winter but it is very urgent that no delay be tolerated in beginning work as early as possible in the spring.

It will be very gratifying if this enlargement of the

Boulevard Well Plant serves the purpose of giving the citizens of Lowell water free from iron and its accompanying growth of *Crenothrix*, otherwise the problem of a suitable supply will be a serious and formidable, not to say, expensive proposition. The fact, however, that for many years the Boulevard Wells yielded an abundant supply of good water, makes the further development of that territory the wisest thing to do at once.

Much more work might have been accomplished in advancing the new well work but for the very slow delivery of flanged suction pipe by the Standard Pipe & Foundry Co. who had the contract. Some of the pipe called for by this contract, although ordered September 8th, had not been delivered at the close of the year.

The quantity of water pumped from wells during the year 1911:

Boulevard Wells	1,472,019,019 gals.
Cook Wells.....	354,615,872 "
Total yield	1,826,634,891 "

In 1910:

Boulevard Wells	1,806,579,671 gals.
Cook Wells	231,836,416 "
Total yield	2,038,416,087 "

These figures show a falling off from the Boulevard Wells of over 334,560,652 gallons for the year. To offset this, the Cook Wells had to be run longer and 122,779,456 gallons more of that water were used than in 1910.

OPERATION

One of the chief expenditures of the Department is that incurred by the necessity of pumping and repumping the water used, and to lessen this cost should be the endeavor of the Department Officials. This has been effected in the past by checking and reducing the amount of water wasted and more recently by installing up-to-date machinery requiring less coal for operation.

During the past year an important improvement has been made in the pumping equipment by the replacing of the Morris Engine, 5,000,000 gallons daily capacity, started in 1871, by an 8,000,000 gallons Vertical Triple Expansion Crank and Fly Wheel Engine, manufactured by the Allis-Chalmers Co., of Milwaukee, Wisconsin. This pump was first started and ready to run June 2nd, and officially tested August 24th. At the test it developed a duty of 163,232,633 foot lbs. per 1,000 lbs. of dry steam. For further figures see Report of Test by Will J. Sando who represented the City.

In order to make room for the new pump, the old Morris Engine and the huge brick foundation upon which it set had to be removed. Taking down the foundation was a slow and expensive job, as it was laid thirty years before in hydraulic brick masonry. This masonry was all removed from the engine-room floor down to the timber and pile sub-foundations—twentytwo feet in depth. Centering upon this sub-foundation, the cement concrete foundation for the new pump was set. Owing to the size and shape of the new pump, part of the pump well of the Morris and Low Duty Worthington Pumps had to be filled in up to the grade of the basement floor, and the brick walls

torn down to make more space around the pump chamber of the new engine. The discharge end of the new pump is connected by means of two 24" curved pipes to the 24" force main formerly connected to Morris Engine. A 24" Ludlow Valve hydraulically operated, and check valve of the same manufacture was set on this main between pump and basement wall. On the suction pipe for the pump a 30" hydraulically operated valve was set between the condenser and pump well. The suction main runs horizontally from nozzle of condenser through new wall into pump well. Five feet inside well a 30" 90° bend is placed looking down into the well. From this bend extends a seven-foot piece of pipe to specially made foot plate which in turn rests on brick piers about three feet above bottom of pump well.

In order to operate the new pump at a high steam pressure, a new 200 H. P. Edge-Moor water tubular boiler was installed next to No. 4 H. R. Tubular boiler. This boiler is capable of carrying steam at 200 lbs. pressure. It is also equipped with a Foster Super-Heater guaranteed to give 100 degrees super-heat. The smoke uptake for this boiler is from the top and rear and runs into smoke stack above the granite belt on same, instead of into bottom of chimney as formerly. No. 3 and No. 4 boilers were also connected with the new uptake—Lumsden & Van Stone. Extra strong steam pipe was used for connecting new pump and boilers and a reducing valve was set between new and old steam lines for the purpose of reducing steam pressure to 90 lbs. on line going to High and Low Duty Worthington Pumps, High Service Pump and Electric Lighting Engine.

At the Cook Wells Pumping Station a new steam

piston rod and head complete was placed in No. 1 pump and a new 72" boiler was installed in place of No. 1 boiler, condemned by the Hartford Boiler Insurance & Inspection Company for further service unless retubed, which would cost considerable, besides the shell of the boiler was patched several years before.

The new \$100,000.00 loan provides for a new building to take the place of the present Boulevard Lower Pumping Station. The season being quite late when the contract was awarded, Mr. Patrick O'Hearn, the Contractor, was only able to put in the concrete foundations until the coming spring.

At the Centralville Pumping Station, besides the new pump, boiler and appurtenances already described, the basement walls surrounding the new pump were finished in enamel brick.

COAL CONSUMED AT THE DIFFERENT PUMPING STATIONS, 1911.

Centralville Station, for pumping	2,411,658 lbs.
Centralville Station for shop.....	911,582 "
Boulevard Station for pumping.....	1,266,044 "
Boulevard Station for lighting.....	23,145 "
Cook Wells Station for pumping.....	1,545,610 "
	<hr/>
	6,158,039 "

NEW RESERVOIR

Another important work provided for by the \$100,000.00 loan is that of the New Reservoir. This reservoir which is to be located on part of present reservoir lot northeast

of the reservoir and thirty-four (34) feet higher in elevation, will have a capacity of 5,000,000 gallons. It will be covered, and of reinforced concrete construction throughout. Part of the walls will be in embankment and part in excavation.

About fifty percent of the excavation work was done by the Department labor before the advent of severe winter weather caused suspension until spring. It is calculated that the earth excavated can be all used for the embankments. With good luck and an early start, the possibilities are that it will be ready for use by July next. This is one of the improvements recommended by the National Board of Underwriters in their report of the City of Lowell, September, 1908. It is intended to supply all the low service mains from the reservoir, the old reservoir to be cleaned and repaired, then refilled and kept in reserve.

DISTRIBUTION

The street mains were extended the past year 16,805 feet for low service and 1,377 feet on the high service systems, making a total of 18,182 feet added to the distribution pipes of the city, compared with 9,875 feet in 1910.

The longest extension was on Varnum Avenue, from the Forrest House to the City Line, a distance of 4,749 feet. The total pipe in use January 1st, 1912, in miles, is 148.75.

Besides the extensions included in the foregoing figures, 7,285 feet of street mains were removed or discontinued, and all but 380 feet taken out of School Street replaced by larger pipe. For instance, Shaw Street, from Powell

to Warwick Street, 1,475 feet of 6" was replaced by 10" pipe; Hale Street from Thorndike to Washington Street, 1,755 feet of 12" main was laid in place of 6"; and on Parker and Pine Streets, over 1,900 feet of 6" pipe was changed for 8". This work, as well as some of the extensions, was for the purpose of enlarging the piping system in localities where the development in the building line called for more water.

This coming year the 12" main in Hale Street should be extended to Chelmsford Street, and when the railroad crossing in School Street is finished, the pipe in that street, now 6", should be replaced with 12" from Broadway to Branch Street, thus reinforcing the Highlands and increasing the working pressure for fire and domestic use in that section where the pressure, during times of excessive consumption is very low. These changes in the principal mains supplying the Highlands together with the increased elevation of the new reservoir over the old one, will be a great benefit to the water takers in that part of the city.

One of the most expensive jobs of street pipe laying was the moving of the 12" main in Lawrence Street, on account of widening the street between Watson Street and Wamesit Canal, a distance of 530 feet. This involved the digging of two trenches, one on the old line to remove pipe, and the other for the new location. In connection with this work was also the necessity of taking up temporary main through Stirling Company Yard and changing hydrants and fire services for the Stirling Mills and Stott Mills. At the same time an 8" pipe formerly used for a fire service by Stott's Mill, between Watson Street and the mill, was taken up.

The construction of a new bridge on Cambridge Street across Hale's Brook occasioned the removal of the 10" main there. It will not be relaid until next spring, upon the advice of the Bridge Engineer who thought the filling about the abutments should have the winter to settle in, to make it safe for the pipe.

Another piece of pipe laying to be done this coming year is the 8" main on Pawtucket Bridge, frozen and burst last winter. To prevent a recurrence of this freezing, pipe covering was purchased and is now in stock ready to be used when the line is repaired and restored to service.

Three private fire service lines were laid during the year, as follows:

N. E. Tel. & Tel. Co., Appleton Street corner of Elliott, 4".

Wm. J. Freeman Mill, West Adams Street, 4".

Lowell Shuttle Co., Tanner Street, 6".

Two fire services were discontinued and cut off, viz.:

Pevey's Mill, Walker Street, between West Adams Street and railroad tracks.

W. H. Bagshaw, Wilson Street.

Whole number of private fire services now in use are: metered services 42; unmetered,* 74; total 116.

In connection with the various extensions, fire services and hydrants, sixty-five (65) stop gates were set and fifteen (15) removed, making a net gain of fifty (50). and a total number of 1,672 in use.

Eighty-three gates were repacked and repaired during the year.

STREET SPRINKLER HYDRANTS

For filling electric car sprinklers there are twenty-two hydrants set in the streets and connected with main pipe. Three of these are 6" connections; sixteen are 4"; and three are 3". The latter connection is the proper size especially on the outskirts of the city. The 6" and 4" hydrants are too large, and when used, are the cause of roily water in the section in which they are situated.

The same is true to a less extent regarding the stand-pipes for filling the sprinkler carts. Most of them have 2" connections and effect the houses in the immediate neighborhood. Cutting down the size of these connections would be the means of avoiding a great deal of complaint of dirty water. For that reason those hydrants and stand-pipes set in the last two years, are supplied with smaller taps at the main.

HYDRANTS

The number of fire hydrants has been increased by twenty-five, and seventeen flush hydrants have been replaced by post hydrants. Of late years the policy of the Department has been to replace these hydrants gradually, until the number has been reduced from 458 in 1900 to 323 in 1911. As they are the very oldest hydrants in the city, it can only be a question of a few years when their condition will force their removal for up-to-date post hydrants.

There were one hundred eighty-three (183) hydrants examined and repaired during the year.

HYDRANTS CHANGED, 1911.

TAKEN OUT	SET	STREET
Michigan	Ludlow	Tolman Avenue
Pratt & Cady	"	Marginal Street
Corey	"	Clark Road
Chapman	"	West Street
Holyoke	"	Jackson Street
Flush	"	Butterfield "
"	"	Arlington "
"	"	Cabot "
"	"	Dodge "
"	"	Gorham "
"	"	Lawrence "
"	"	Merrimack "
" (2)	" (2)	Moody "
"	"	Mt. Vernon "
"	"	Salem "
"	"	Thorndike "
"	"	Walker "

Eighteen (18) hydrants changed in 1911.

HYDRANTS, JANUARY 1, 1912.

KIND	Flush	2 Noz.	3 Noz.	4 Noz.	Total
Boston Machine.....			170		170
Chapman		3	108	51	162
Coffin			1		1
Corey			37		37
Eddy.....			32	1	33
Fairbanks			19		19
Flush	323				323
Glanmorgan			1		1
Holyoke				1	1
Kennedy			1		1
Lowrey 10					10
Ludlow.		3	467	14	484
Michigan			14		14
O'Brien			1		1
A. P. Smith.....			1		1
Perkins				1	1
Walker.....			17		17
Totals 10	323	6	869	68	1,276

HYDRANTS DISCONTINUED, 1911.

Riverside Street	Boston Machine Hydrant
Lilley Avenue	Eddy Hydrant
Canal Street	Flush Hydrant
School Street	Ludlow Hydrant
Wellington Street	Ludlow Hydrant

NEW HYDRANTS, 1911.

Aiken Avenue.....	Ludlow Hydrant
B Street	Chapman Hydrant
Cumberland Road	Ludlow Hydrant
Essex Street.....	“ “
Grafton Street	“ “
Grand Street.....	“ “
Gorham Street.....	“ “
Hale Street	“ “
Hawthorne Street.....	“ “
Henry Avenue	“ “
Highland Avenue.....	“ “
Martin Street	Holyoke Hydrant
Monadnock Street...	Ludlow Hydrant
Pawtucket Boulevard.....	“ “
Payne Street.....	“ “
Pleasant Street ...	“ “
Preston Street	Boston Post
Richards Street....	Eddy Hydrant
Rutland Street.....	Ludlow Hydrant
Stafford Street.....	“ “
Varnum Avenue Six (6)	“ “
Walker Street	“ “
West View Street, Two (2)	“ “
White Street.....	“ “

30 new hydrants set, 1911.

SERVICES

More new services were laid last year than for the two previous years. The figures for 1910 were 228 services amounting to 8,831 feet against 255 services or 10,549 feet in 1911. According to the table carried in the annual reports, the total number of services in use number 12,494. This, however, does not agree with the number charged in the office books.

Expended for services 1911, labor.....	\$ 5,182 01
Expended for services 1911, service pipe.....	7,539 97
Estimated cost of service cocks made in Department Shop.....	1,703 00
Total expended for services	\$14,424 98
Total charged for services.....	5,763 05
Average cost per service, labor and material, new and changed for 1911.....	26 03
Average cost per service for labor, digging, etc.	9 35
Average cost per service for material	\$ 16 68
Average length of new services laid in 1911, 41 feet.	

NEW SERVICES

NUMBER	KIND	FEET
178	$\frac{3}{4}$ " tin lined iron pipe.....	6,774—1"
33	1" tin lined iron pipe.....	1,068—0
1	2" cement lined pipe.....	36—0
14	$\frac{3}{4}$ " galvanized iron pipe.....	539—7"
9	1" galvanized iron pipe.....	1,097—9"
6	1 $\frac{1}{2}$ " galvanized iron pipe.....	175—8"
11	2" galvanized iron pipe....	779—0
2	4" cast iron pipe.....	34—1"
1	6" cast iron pipe.....	45—0
<hr/> 255		<hr/> 10,549—2"

Total previously laid.....	494,487 feet
Total now laid.....	505,036 "
Total services laid.....	13,628 "
Total cut off at main.....	988 "
Total reconnected.	79 "
Total now in use.	12,719 "

SERVICES CHANGED, 1911

[illegible]

SERVICES CHANGED, 1911—Continued.

No.	KIND	CHANGED TO								TOTAL FEET	
		Tin Lined ¾ in.	Tin Lined 1 in.	Galv. Iron ¾ in.	Galv. Iron 1 in.	Galv. Iron 1½ in.	Galv. Iron 2 in.	Cement Lined 1½ in.	Lead ¾ in.		Cast Iron 4 in.
1	¾" L. L. Iron	.....	.....	.....	.....	.....	.....	.....	33	.....	33
1	1" L. L. Iron	.....	36-6	.....	.....	.....	.....	.....	.....	.....	36-6
1	⅝" Lead.....	.....	.....	10-6	.....	.....	.....	.....	.....	.....	10-6
6	⅝" " ".....	79-9	.....	.....	.....	.....	.....	.....	.....	.....	79-9
1	⅝" " ".....	.....	35	.....	.....	.....	.....	.....	.....	.....	35
1	⅝" " ".....	.....	.....	.....	.....	.....	.....	.....	10	.....	10
6	¾" " ".....	.....	153-4	.....	.....	.....	.....	.....	.....	.....	153-4
8	¾" " ".....	129-6	.....	.....	.....	.....	.....	.....	.....	.....	129-6
1	¾" " ".....	.....	.....	.....	.....	22-6	.....	.....	.....	.....	22-6
6	1" " ".....	.....	130-6	.....	.....	.....	.....	.....	.....	.....	130-6
1	1" " ".....	29	.....	.....	.....	.....	.....	.....	.....	.....	29
1	1" " ".....	33-6	.....	.....	.....	.....	.....	.....	.....	.....	33-6
1	1" " ".....	.....	.....	.....	.....	.....	.....	17-5	.....	.....	17-5
2	¾" T. L. Iron	.....	76	.....	.....	.....	.....	.....	.....	.....	76
5	¾" T. L. Iron	121-6	.....	.....	.....	.....	.....	.....	.....	.....	121-6
295		5996-1	1501-10	523-11	193-6	95-6	231-4	17-5	43	32	8634-7

METERS

Four hundred and nine new meters were set during the past year. Twenty-four of these, however, were replacing condemned meters, leaving three hundred eighty-five of an increase, and making a total of 10,215 meters running January 1st, 1912. Deducting this 10,215 meters from 12,494 services as per annual reports, leaves 2,279 or 18% unmetered. On the basis of the office accounts the percentage of unmetered services would be less.

To reconcile this discrepancy would mean considerable work on the books to find the error, but it does seem as though it should be corrected. To the increased use of meters is no doubt due the low consumption of water which for 1911 shows a decrease in consumption of about a quarter of a million gallons per day.

Expended for labor for repairing, testing and setting meters.....	\$4,711.53
Expended for new meters and material for repairs	<u>5,175.01</u>
Total expended on account of meters....	\$9,886.54
Total charge on account of meters	\$8,621.59

PRIVATE METERS RUNNING JANUARY 1, 1912.

SIZES	$\frac{3}{8}$ in.	$\frac{5}{8}$ in.	$\frac{3}{4}$ in.	1 in.	1½ in.	2 in.	Total
Columbia		9					9
Crown	1	32	24	2	2		61
Desper.....			3	1			4
Duplex		1					1
Empire		6				1	7
Frost.....		1	1				2
Hersey		52	4			1	57
Keystone				1			1
King.....		1					1
Lambert.....		22					22
Nash		24	2	2		1	29
Thomson			1				1
Trident.....		5					5
Worthington				1		3	4
Worthington-Disc		1					1
Total	1	154	35	7	2	6	205

New meters set.....	385
Meters out for repairs.....	750
Meters reset.....	716
Meters condemned.....	22
Meters condemned—replaced with new.....	24
Meters frozen and burst.....	77
Meters discontinued.....	8
Meters sold for private use.....	15
Private meters discontinued.....	8

METERS RUNNING JANUARY 1, 1912.

SIZES	$\frac{5}{8}$ in.	$\frac{3}{4}$ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	6 in.	8 in.	Total
Columbia	109	3								112
Crown	3205	1650	339	25	44	6	6	5		5280
Desper	14	4	3							21
Duplex	1		2							3
Empire ...	269	46	10	6	6	2				339
Gem					8		5	1		14
Hersey	1417	205	21	9	4	1	1			1658
Hersey Detector .						1	8	23	4	36
Keystone	58				1					59
King	81	3								84
Lambert	806	87	14	1	1					809
Nash	569	119	56		2					746
Niagara	1									1
Thomson	5	19	2							26
Torrent						1	2			3
Trident	572	35	1	1						609
Union	28	7		1						36
Watch Dog	5									5
Worthington	52	3	32	40	32	5	3			167
Worth-Disc	99	8								107
Total	7291	2189	480	83	98	16	25	29	4	10,215

MAINTENANCE

The importance of the upkeep of a Water Works System cannot be overestimated. Repairs and renewals grow with the years and must be attended to or impairment of the service will surely follow. Many and varied are the causes of wear and deterioration. The driven wells get clogged and rusted requiring frequent cleaning and occasional repairs and renewals. At least annually the conduit and tunnel that carry the water from the wells to the Centralville Pumping Station should be inspected and washed clean.

At the Inlet Chamber on Varnum Avenue corner of Starbird Street, last year, a new floor and new floor beams and sills had to be put in. The copper screens at this house have to be cleaned twice a week. Service pipes get filled up; valves need new packing; curb and gate boxes are frequently broken; pumping stations, gate houses, shop, stable and other buildings have to be repainted; fences rot and break; hydrants and street gates get out of order; tools and rigging wear and break; street mains gather sediment and rust, and have to be flushed; meters fall off in registration or fill up, et cetera, et cetera. Collecting sufficient water of good quality; pumping it twice; storing it in reservoirs; distributing it through 150 miles of main pipe; delivering it through 13,000 service pipes for the domestic use of 106,000 people; 10,000 meters to measure its use; fire hydrants kept in condition and supplied with water for extinguishing fires, all fitted with valves and stops to control the water in case of alterations, leaks and breaks, must of necessity be costly to maintain, and grow more so every year.

The action of the water itself, although it be the best, has a tendency to destroy and disintegrate the physical make-up of a Water Works Plant, not to mention other factors that enter into its depreciation.

In conclusion, I wish again to emphasize above all things, the importance of getting early to work in improving the quality of the water.

Respectfully submitted,

ROBERT J. THOMAS,

Superintendent.

LOW SERVICE—LIST OF HYDRANTS SET DURING
THE YEAR 1911.

STREET	LOCATION
Aiken Ave	East side, Aiken Ave , near Lilley Ave.
B.	North side, 3 ft. east of east line Chauncey St.
Butman Road.	Location changed from 45 ft. south of south line Whitehead St. to 39 ft. north of north line of Whitehead St.
Butterfield.	South side, 319 ft. east of east line Mt. Vernon St.
By.	Location changed from first angle from Hildreth St., north side, to second angle from Hildreth St., north side.
Cumberland Rd.	West side, 35 ft. south of south line of Farmland Road.
Essex	East side, 98 ft. north of north line Farmland Road.
Gorham	West side, 60 ft. south of south line Appleton St.
Grafton	West side, 289 ft. north of north line Woburn St.
Grand.	North side, 254 ft. south of south line Chelmsford St.
Hale.	South side, 183 ft. east of east parapet of B. & M. RR. bridge.
Hawthorn.	West side, 540 ft. south of south line of Pine St.
Henry Ave.	West side 339 ft. north of north line of Osgood Ave.
Highland Ave.	West side, 144 ft. south of south line of Wedge St.
Jackson.	Location changed from 11 ft. east of east line Revere St. to 41 ft. east of east line of Revere St., south side.
Lawrence.	Location changed from 92 ft. south of north line Ar- lington Worsted Mills storehouse to 71 ft. south of same Post Hydrant, north side.
Martin.	North side, 220 ft. east of north line Sparks St.
Monadnock	West side, 13 ft. south of south line of Raynor St.

LOW SERVICE—LIST OF HYDRANTS SET DURING
THE YEAR 1911—Continued.

STREET	LOCATION
	*Indicates for grade crossings
Parker... ..	Location changed from 142 ft. south of south line of Walden St. to 118 ft. south of same.
Paw. Boulevard	Location changed from north side opposite Upper Pumping station to north side of engineer's house.
Payne	South side, 75 ft. east of east line School St.
Pleasant	West side, 39 ft. north of south line Andover St.
Preston.....	North side, 2 ft. east of west line of Wilbur St.
Rutland	West side, 14 ft. north of north line Westford St.
*School.....	Location changed from east side 260 ft. south of north line Perrin St. to west side 29.5 ft. north of north side of North abutment B. & M. RR. bridge.
Varnum Ave ...	North side, 3 ft. east of west line Carl A. Palm's house.
Varnum Ave....	North side, 790 ft. north west of Carl A. Palm's house.
Varnum Ave....	North side, 100 ft. west of west line Samuel E. R. Adam's house.
Varnum Ave....	North side, 215 ft. west of west line Sarah F. Van Tassell's house.
Varnum Ave....	North side, 69 ft. east of east line Daniel V. Webster's house.
Varnum Ave....	North side, 100 ft. east of City line.
Walker.....	West side, 94 ft. south of south line Columbus Ave. Post hydrant replacing flush hydrant.
*Walker	West side, 8 ft. south of south line of West Adams St.
West View	West side, 115 ft. south of north line R. J. Johnson's land.
West View	West side, opposite south line of Sarah C. Hannigan land.
White.....	West side, 7 ft. north of north line Riverside St.

HIGH SERVICE—LIST OF HYDRANTS SET DURING
THE YEAR 1911.

STREET	LOCATION
Richards.....	North side, 383 ft. east of east line of Beacon St.
Stafford.....	West side, 294 ft. north of north line of Andover St.

LOW SERVICE—LIST OF HYDRANTS REMOVED
DURING 1911.

STREET	LOCATION
Butterfield.....	North side, 299 ft. east of east line Mt. Vernon St. Flush hydrant.
Lilley Ave.....	West side, near Aiken Ave.
Riverside.....	North side, 268 ft. west of west line of White street.

LOW SERVICE—LIST OF STOP GATES SET DURING THE YEAR 1911.

Streets	LOCATION (* Indicates for grade crossing.)					
		4 in.	6 in.	8 in.	10 in.	12 in.
Aiken Avenue....	1.3 ft. west of east line of Aiken Ave., on south line of Dalton St.....	....	1	....	....	....
Albion.....	12 ft. east of west line of Albion St., on north line of West 3rd St.....	....	1	....	....	....
Appleton.....	16.5 ft. south of north line of Appleton St., 36.5 ft. east of east line of Elliott St. New England Tel. & Tel. Co. Build., supply and fireservice	1	....	....	....	....
B.....	12 ft. south of north line of B. St., on west line of Wilder St.....	....	....	1	....	....
B.....	12 ft. south of north line of B St., on east line of Stevens St.....	....	....	1	....	....
Bennett	12 ft. east of west line of Bennett St., on north line of Shaw St.....	....	1	....	....	....
Cambridge.....	12 ft. east of west line of Cambridge St., on south line of Hale St.....	....	....	....	1	....
Cumberland Road	12 ft. east of west line of Cumberland Rd., on south line of Farmland Rd.....	....	1	....	....	....
Farmland Road ..	12 ft. north of south line of Farmland Rd., 3 ft. west of west line of Essex St.....	....	....	1	....	....
Gates.....	12 ft. west of east line of Gates St., 1 ft. south of south line of Sheldon St.....	....	1	....	....	....
Georgia Avenue...	12 ft. east of west line of Georgia Avenue on north line of Pine St.....	....	....	1	....	....
Grand.....	18 ft. south of north line of Grand St., 15 ft. west of east line of Chelmsford St.....	....	1	....	....	....
Hale.....	47 ft. north of south line of Hale St., 50 ft. west of east line of Thorndike St. Replacing 6 in. gate.	....	....	....	....	1
Hale.....	10 ft. north of south line of Hale St., 45.5 ft. east of east parapet B. & M. R. R. Bridge.....	....	....	1	....	....
Hale.....	9.5 ft. north of south line of Hale St., 43 ft. east of east parapet B. & M. R. R. bridge.....	....	....	1	....	....
Hale.....	12.2 ft. north of south line of Hale St., 28 ft. west of west parapet B. & M. R. R. bridge.....	....	....	1	....	....
Hale.....	12.2 ft. north of south line of Hale St., 30 ft. west of west parapet B. & M. R. R. bridge.....	....	....	1	....	....
Hale.....	12.5 south of north line of Hale St., on west line of Howard St .....	....	....	....	....	1

LOW SERVICE—LIST OF STOP GATES SET DURING
THE YEAR, 1911, Continued.

Street	LOCATION (* Indicates for grade crossing)	4 in.	6 in.	8 in.	10 in.	12 in.
Hale.....	12 ft. south of north line of Hale St., on east line of Cambridge St.					1
Hale.....	13 ft. south of north line of Hale St., on west line of Cambridge St.					1
Harris Avenue....	12 ft. east of west line of Harris Ave., on north line of B St.			1		
Hastings	12 ft. west of east line of Hastings St., on north line of Shaw St.		1			
Highland Avenue.	12 ft. east of west line of Highland Ave., on south line of Wedge St.			1		
Howard	12.5 ft. east of west line of Howard St., on north line of Hale St.		1			
Humphrey	12 ft. north of south line of Humphrey St., on west line of Willard St.		1			
Inland.....	12 ft. north of south line of Inland St., on east line of Lang St.		1			
Jackson.....	13.5 ft. north of south line of Jackson St., 41 ft. east of east line of Revere St. For hydrant.		1			
Lawrence.....	12.5 ft. west of east line of Lawrence St., on south line of Sherman St., moved.					1
Lawrence.....	13 ft. west of east line of Lawrence St., 41 ft. north of north side of Wamesit Canal.					1
Lawrence.....	11 ft. west of east line of Lawrence St., 12 ft. north of south line of Sherman St., Stirling Mills Fire Service, moved.				1	
Lawrence.....	6.2 ft. west of east line of Lawrence St., 98 ft. south of south line of Sherman St., for blow off, moved.		1			
Lawrence.....	10 ft. west of east line of Lawrence St., 71 ft. south of north line of Arlington Worsted Mills Store House, for hydrant, moved.		1			
Lawrence.....	16 ft. west of east line of Lawrence St., 96 ft. north of south line of store house of Arlington Worsted Mills. Fire Service Belvidere No 2 Mill, moved.		1			
Lawrence.....	13 ft. west of east line of Lawrence St., 11 ft. south of south line of Belvidere No. 2 Mill, for hydrant.		1			
Lawrence.....	14.5 ft. west of east line Lawrence St., 102 ft. north of north line Sherman St., for car sprinkler—(1, 3 inch).					

LOW SERVICE—LIST OF STOP GATES SET DURING
THE YEAR 1911—Continued.

Street	LOCATION (*Indicates for grade crossings.)	4 in.	6 in.	8 in.	10 in.	12 in.
Leverett.....	12 ft. south of north line Leveret St., 2 ft. east of east line Lincoln St.....		1			
Lilley Ave.....	11.5 ft. south of north line Lilley Ave., on west line Cumberland Road.....		1			
Martin.....	13 ft. south of north line Martin St., on north line Sparks St.....		1			
Orleans.....	12 ft. south of north line Orleans St., 2 ft. west of west line Hildreth St.....		1			
Parker.....	12 ft. south of north line Parker St., on west line Oakland St.....			1		
Parker.....	12 ft. west of east line Parker St., on south line Pine St.....			1		
Pine.....	13.5 ft. north of south line Pine St., 46.2 ft. from intersection Westford St.....			1		
Pine.....	13.5 ft. south of north line of Pine St., on west line Foster St.....			1		
Pine.....	13 ft. south of north line Pine St., on west line Florence Ave.....			1		
Pine.....	15 ft. south of north line Pine St., on east line Georgia Ave.....			1		
Pond.....	17.5 ft. south of north line Pond St., 1 ft. west of west line Pleasant St.....		1			
Preston.....	12 ft. south of north line Preston St., on west line Stevens St.....		1			
Puffer Ave.....	6.5 ft. north of south line Puffer Ave., on west line Jewett St.....	1				
Railroad,.....	13 ft. east of west line Railroad St., on north line Hale St.....		1			
Raynor.....	12 ft. south of north line Raynor St., on west line Pine St.....		1			
Rutland.....	13 ft. east of west line Rutland St., on north line Westford St.....		1			
Saunders.....	8 ft. east of west line Saunders St., 1 ft. north of north line Middlesex St.....	1				
School.....	12.7 ft. east of west line School St., on north line Shaw St.....		1			

LOW SERVICE—LIST OF STOP GATES SET DURING
THE YEAR 1911—Continued.

Street	LOCATION (*Indicates grade crossings.)	4 in.	6 in.	8 in.	10 in.	12 in.
Shaw	10.5 ft. south of north line Shaw St., on west line Powell St.....				1	
Shaw	10.7 ft. south of north line Shaw St., on west line Hastings St.....				1	
South Highland...	14 ft. south of north line South Highland St., 3 ft. west of west line Gorham St.....		1			
South Loring.....	12.8 ft. east of west line South Loring St., 1 ft. south of north line Shaw St.....		1			
South Loring.....	12.5 ft. east of west line of South Loring St., on south line of Shaw St.....		1			
South Walker.....	15 ft. west of east line South Walker St., on north line Shaw St.....		1			
South Walker.....	15 ft. west of east line South Walker St., on south line Shaw St.....		1			
Sparks.....	13 ft. south of south line Sparks St., 25 ft. west of east line Riverside St.....		1			
Tanner.....	Fire Service 20.5 ft., south of north line Tanner St. 6 ft. east of west line of Lowell Shuttle Co, building		1			
Varnum Ave.....	North side, 3.2 ft. west of hydrant opposite Wm. Barker's house.....			1		
Varnum Ave.....	North side, 11 ft. east of east line Samuel E. R. Adam's house.....			1		
Varnum Ave.....	North side, 6 ft. west of hydrant, 215 ft. west of west line Sarah F. Van Tassell's house.....			1		
Varnum Ave.....	North side, 37 ft. east of east line Daniel V. Webster's house.....		1			
Walker.....	14.5 ft. east of west line Walker St., on north line Middlesex St.....			1		
*Walker.....	15 ft. east of west line Walker St., on north line West Adams St.....			1		
*Walker.....	15 ft. east of west line Walker St., on south line Waugh St.....			1		
Walker.....	16 ft. east of west line Walker St., on south line Broadway.....			1		
Walker.....	Lamson Store Service Co. Fire Service. Location changed 20.5 ft. west of east line Walker St., 111 ft. south of south line Broadway.		1			

LOW SERVICE—LIST OF STOP GATES SET DURING
THE YEAR 1911—Continued.

Street	LOCATION (*Indicates grade crossings.)	4 in.	6 in.	8 in.	10 in.	12 in.
Warwick.....	10.8 ft. west of east line Warwick St., on south line Shaw St.....		1			
*West Adams.....	11 ft. south of North line West Adams St., on west line Walker St.....		1			
*West Adams.....	Fire Service, Wm. J. Freeman building, 5.3 ft. south of north line West Adams St., 61 ft. west of west line Walker Street.....	1				
*Western Ave.....	14 ft. north of south line Western Ave., 29 ft. west of east end retaining wall.....				1	
*Western Ave.....	14.5 ft. north of south line Western Ave., 8 ft. west of east wall of ramp.....		1			
West View.....	15.5 ft. south of north line Pine St., 51 ft. east of east line.....		1			
West View.....	3 ft. south of hydrant opposite R. J. Johnson's house.....		1			

HIGH SERVICE—LIST OF STOP GATES SET DURING THE YEAR 1911.

Street	LOCATION	4 in.	6 in.	8 in.	10 in.	12 in.
Andover.....	26.3 ft. north of south line Andover St., 15.5 ft. east of west line Nesmith St.....	.....	.....	1	.....	.....
Mansfield.....	13 ft. south of north line Mansfield St., on west line Clark Road, north.....	.....	1	.....	.....	.....
Stafford.....	12 ft. east of west line of Stafford St., on north line Andover St.....	.....	1	.....	.....	.....
Summit.....	14 ft. south of north line Summit St., on west line Belmont Ave.....	.....	1	.....	.....	.....
Belmont Ave.....	14 ft. east of west line of Belmont Ave., on north line Summit St.....	.....	.....	1	.....	.....

LOW SERVICE—LIST OF STOP GATES REMOVED DURING THE YEAR 1911.

Street	LOCATION	4 in.	6 in.	8 in.	10 in.	12 in.
Hale.....	22 ft. north of south line Hale St., 3 ft. east of west line Thorndike St.....	1				
Hale.....	23 ft. north of south line Hale St., 7 ft. east of west line Howard St.....	1				
Hale.....	13 ft. south of north line Hale St., 19 ft. west of east line Cambridge St.....	1				
Hale.....	13 ft. south of north line Hale St., 9.5 ft. east of west line Cambridge St.....	1				
Parker.....	12 ft. west of east line Parker St., on south line Pine St.....	1				
School.....	3.5 ft. west of east line School St., 89.5 ft., north of Sawtelle Place blow off.....	1				
School.....	32.5 ft. east of west line School St., 113.5 ft. north Sawtelle Place.....	1				
Shaw ...	8.5 ft. south of north line Shaw St., 4 ft. west of west line Powell St.....	1				
Shaw	10.5 ft. south of north line Shaw St., 3.5 ft. east of east line Hastings St.....	1				
Shaw	11.5 ft. south of north line Shaw St., on east line South Loring St.....	1				
Shaw	14.5 ft. south of north line Shaw St., 2.5 ft. west of east line South Walker St.....	1				
Shaw	14 ft. south of north line Shaw St., on west line South Walker St.....	1				
Walker.....	23.8 ft. west of east line Walker St., on south line Broadway	1				
Walker.....	15 ft. east of west line Walker St., on north line Columbus Ave.....	1				
Walker.....	14.5 ft. east of west line Walker St., 2 ft. north of north line Middlesex St.....	1				

LOW SERVICE—WATER PIPE LAID IN 1911.

Street	LOCATION (*Indicates for grade crossings.)	Length of pipe in feet.					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Albion.....	Extended northerly from West 3rd St. to West 4th St. (Re-placing 120 ft. 1½ in. W. I. pipe.).....	.....	271	.....	.....	.....	271
Appleton	Fire Service and supply N. E. Tel. & Tel. Co. building... ..	21	.....	.....	.....	.....	21
B	Extended westerly from Wilder St. to Stevens St.....	.....	7	710	.....	.....	717
Bennett.. ..	Extended northerly from Shaw St. ....	.....	230	.....	.....	.....	230
Butman Road.....	Extended northerly of Whitehead St. ....	.....	130	.....	.....	.....	130
By.....	Extended easterly to second angle.....	.....	126	.....	.....	.....	126
Carlisle.....	Extended southerly .....	.....	98	.....	.....	.....	98
Cumberland Road..	Extended northerly across Farmland road.....	.....	183	.....	.....	.....	183
Columbus Ave. Ext.	Extended easterly .....	.....	90	.....	.....	.....	90
Essex	Extended northerly from Farmland Road to hydrant. (Re-placing 60 ft. of 6 in. pipe.).....	.....	6	131	.....	.....	137
Farmland Road....	From Cumberland Road to Essex St.....	.....	.....	496	.....	.....	496
First	Extended easterly.....	.....	48	.....	.....	.....	48
Ford.....	Extended westerly.....	.....	60	.....	.....	.....	60
Gates.....	Extended southerly to Thayer St.....	.....	23	.....	.....	.....	23
Georgia Ave.....	Extended southerly to Pine St.....	.....	221	.....	.....	.....	221

LOW SERVICE—WATER PIPE LAID IN 1911—Continued.

Street	LOCATION (*Indicates for grade crossings.)	Length of pipe in feet.					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Grafton....	Extended easterly .....	.....	223	.....	.....	.....	223
Grand.....	Extended from Chelmsford St. southerly.....	.....	276	.....	.....	.....	276
Hale.....	Extended westerly from Thorndike St. to B. & M. RR. bridge.....	.....	8	.....	.....	527	535
Hale.....	Extended westerly across railroad bridge, two lines.....	.....	.....	539	.....	.....	539
Hale.....	Extended westerly from Railroad St. to west of Washington St.....	.....	17	.....	.....	1503	1520
Harris Ave.....	Extended southerly to B St.....	.....	.....	221	.....	.....	221
Hawthorn	Extended southerly .....	.....	287	.....	.....	.....	287
Henry Ave.....	Extended northerly .....	.....	285	.....	.....	.....	285
Highland Ave.....	Extended southerly ... ..	.....	.....	172	.....	.....	172
Holden	Extended northerly .....	.....	12	.....	.....	.....	12
Howard	Extended northerly from Hale St. (Replacing old 6 in. pipe.) .....	.....	151	.....	.....	.....	151
Humphrey.....	Extended northerly from Willard St.....	.....	235	.....	.....	.....	235
Inland.....	Extended easterly from Lang St. to connect at hydrant....	.....	329	.....	.....	.....	329
June.....	Connecting 4 in. pipe with 6 in. pipe.....	.....	10	.....	.....	.....	10
Lawrence	Relaid on new lines from Watson St. to near Wamesit canal on account of widening Lawrence St.....	.....	30	.....	.....	500	530

LOW SERVICE—WATER PIPE LAID IN 1911—Continued.

Street	LOCATION (*Indicates for grade crossings.)	Length of pipe in feet					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Leverett.....	From Lincoln St. to Washington St.....	.....	275	.....	.....	.....	275
Lincoln.....	From Blow Off at River Meadow brook to Angle St. (Re- placing 6 in. pipe discontinued.....)	.....	228	.....	.....	.....	228
Martin.....	Extended easterly from Sparks St.....	.....	230	.....	.....	.....	230
Melvin.....	Extended easterly .....	.....	41	.....	.....	.....	41
Monadnock.....	Extended northerly to Raynor St.....	.....	313	.....	.....	.....	313
Mt. Pleasant.....	Extended easterly from Reservoir St.....	.....	113	.....	.....	.....	113
Orleans.....	Extended westerly from Hildreth St.....	.....	223	.....	.....	.....	223
Oxford	Extended southerly.....	.....	48	.....	.....	.....	48
Parker.....	Extended westerly from Oakland St. to Pine St.....	.....	.....	870	.....	.....	870
Payne.....	Extended westerly from Saunders St.....	.....	.....	29	.....	.....	29
Pine.....	Extended westerly from Westford St. (Replacing 6 in. pipe.) .....	.....	4	443	.....	.....	447
Pine.....	Extended westerly from Foster St. to Georgia Ave. (Re- placing 6 in. pipe.).....	.....	.....	1036	.....	.....	1036
Preston.....	Extended westerly from Stevens St. to Wilbur St.....	.....	220	.....	.....	.....	220
Railroad	Extended northerly from Hale St. to hydrant.....	.....	176	.....	.....	.....	176
Raynor.....	Extended westerly from Pine St. to Monadnock St.....	.....	269	.....	.....	.....	269

LOW SERVICE—WATER PIPE LAID IN 1911—Continued.

Street	LOCATION (*Indicates for grade crossings.)	Length of pipe in feet					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Rutland.....	Extended northerly from Westford St.....	.....	240	.....	.....	.....	240
Shaw.....	Extended westerly from Harris Ave. to Bennett St.....	.....	.....	.....	73	.....	73
Shaw.....	Extended westerly from Powell St. to Warwick St. (Re- placing 6 in. pipe.).....	.....	.....	.....	1475	.....	1475
South Highland....	Extended westerly from Gorham St. to Burns St.....	.....	.....	.....	215	.....	215
Sparks.....	Extended easterly from Riverside St. to Martin St.....	.....	117	.....	.....	.....	117
Thayer.....	Extended easterly to Gates St.....	.....	115	.....	.....	.....	115
Tanner.....	Fire Service Lowell Shuttle Co., 20.5 ft. south of north line of Tanner St. to building.....	.....	43	.....	.....	.....	43
Varnum Ave.....	Extended northwesterly from opposite Wm. Barker's house to City line.....	.....	943	3806	.....	.....	4749
Walker.....	Extended from Middlesex St. to Columbus Ave. (Replacing 6 in. pipe.....	.....	.....	472	.....	.....	472
*Walker.....	Extended from Columbus Ave. to 68 ft. north of north line of Waugh St. (Replacing 6 in. pipe.)... ..	.....	.....	708	.....	.....	708
Walker....	Extended from 68 ft. north of north line of Waugh St. to Broadway. (Replacing 6 in. pipe.).....	.....	.....	265	.....	.....	265
Washington	Extended southerly to Leverett St.....	.....	98	.....	.....	.....	98

LOW SERVICE—WATER PIPE LAID IN 1911—Continued.

Street	LOCATION (*Indicates for grade crossings.)	Length of pipe in feet					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Wedge.....	Extended easterly to Highland Ave.....	.....	.....	185	.....	.....	185
*West Adams.....	Fire Service, Wm. J. Freeman building.....	11	.....	.....	.....	.....	11
*West Adams.....	Extended westerly from Walker St. to connect with old 6 in. pipe. (Replacing 6 in. pipe.)... ..	.....	167	.....	.....	.....	167
*Western Ave.....	Extended westerly on new slope to opposite Ramp.....	.....	.....	.....	378	.....	378
*Western Av. Ramp.	Extended down slope to School St.....	.....	291	.....	.....	.....	291
West View	Extended from Pine Street through woodland southerly.....	.....	1625	.....	.....	.....	1625
Wilson	Extended easterly. (Replacing 1½ in. pipe.).....	.....	169	.....	.....	.....	169
	Total Low Service pipe laid in 1911.....	32	9304	10083	2141	2530	24090

HIGH SERVICE—WATER PIPE LAID IN 1911.

Street	LOCATION	Length of pipe in feet					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Andover.....	Connection of High and Low Service at Nesmith St.....	.....	.....	38	.....	.....	38
Belmont Avenue...	Extended northerly from Summit St., to connect with 6 in. pipe.....	.....	.....	244	..	.....	244
Clark Road North.	Extended northerly from hydrant to Mansfield St.....	.....	.....	38	.....	.....	38
Mansfield	Extended westerly from Clark Rd. North to Stafford St....	.....	260	.....	.....	.....	260
Richards.....	Extended easterly .....	.....	230	.....	.....	.....	230
Stafford.....	Extended from Mansfield to Andover St.....	.....	359	.....	.....	.....	359
Summit.....	Extended easterly to Belmont Ave .....	.....	208	.....	.....	.....	208
	Total High Service Water Pipe Laid in 1911.....		1057	320			1377

LOW SERVICE—WATER PIPE REMOVED IN 1911.

Street	LOCATION (*Indicates for grade crossings.)	Length of pipe in feet					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Essex	From Farmland Road northerly. (Replaced with 8 in. pipe.)	.....	60	.....	.....	.....	60
Hale.....	From Thorndike St. westerly. (Replaced with 12 in. pipe.)	.....	432	.....	.....	.....	432
Hale.	From Howard St. to 80 ft. west of Washington St. (Replaced with 12 in. pipe.....	.....	1322	.....	.....	.....	1322
Howard	From Hale St. northerly. (Replaced with 6 in. pipe and discontinued. ....	.....	160	.....	.....	.....	160
Lincoln.....	From blow off at River Meadow brook to near Angle St. (Replaced with 6 in. pipe on new line and grade and discontinued.).....	.....	228	.....	.....	.....	228
Parker	From Pine St. southerly to curve. (Replaced with 8 in. pipe.)	.....	429	.....	.....	..	429
Pine.....	From Westfort St. westerly. (Replaced with 8 in. pipe.)..	.....	440	.....	.....	.....	440
Pine.	From Foster St. to Georgia Ave. (Replaced with 8 in. pipe.)	.....	1036	.....	.....	.....	1036
Railroad	From hydrant to near Hale St. (Replaced with 6 in. pipe and discontinued.).....	141	.....	.....	.....	.....	141
*School.....	From end of 8 in. pipe near B & M. RR. to Perrin St.....	.....	162	.....	.....	.....	162
*School.....	From Western Avenue to near blow off.....	.....	218	.....	.....	.....	218
Shaw.....	From Powell St. to Warwick St. (Replaced with 10 in. pipe.)	.....	1475	.....	.....	.....	1475

LOW SERVICE—WATER PIPE REMOVED IN 1911—Continued.

Street	LOCATION (*Indicates for grade crossings.)	Length of pipe in feet					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Walker.....	From Middlesex St. to Columbus Ave. (Replaced with 8 in. pipe.).....	.....	472	.....	.....	.....	472
*Walker.....	From Columbus Ave. to 14 ft. north of north line of West Adams St. (Replaced with 8 in. pipe.)	.....	267	.....	.....	.....	267
Walker.....	From 68 ft. north of Waugh St. to Broadway. (Replaced with 8 in. pipe.).....	.....	265	.....	.....	.....	265
West Adams.....	From Walker St. westerly. (Replaced with 6 in. pipe and discontinued.).....	.....	167	.....	.....	.....	167
West Adams,.	Fire Service discontinued. (Replaced by 4 in. pipe.).....	.....	11	.....	.....	...	11
	Total Low Service water pipe removed in 1911.....	141	7144				7285

SUMMARY.

Low Service water pipe laid in 1911..	24,090 ft.	
Low Service water pipe laid previous to 1911.....	718,640 ft.	<u>742,730 ft.</u>
Low Service water pipe removed in 1911. (Deduct).....		<u>7,285 ft.</u>
Total Low Service Water pipe in use Jan. 1, 1912...		735,445
High Service water pipe laid in 1911..	1,377 ft.	
High Service water pipe laid previous to 1911	48,597 ft.	<u>49,974 ft.</u>
Total High Service in use Jan 1, 1912.....		49,974 ft.
Total High and Low Service to Jan. 1, 1912.....		785,419 ft.
Total pipe in use Jan. 1, 1912, in miles....		148.75

SCHEDULE OF DISTRIBUTION MAINS IN SERVICE
JANUARY 1, 1912.

	LOW SERVICE	HIGH SERVICE
4 in.	35,307.	1.785.
6 in.	437,332.	29,987.5
8 in.	144,236.5	6,209.5
10 in.	28,193.	4,119.
12 in.	64,991.5	7,873.
16 in.	10,998.	
20 in.	5,832.	
24 in.	3,992.	
30 in.	4,563.	
	<u>735,445.</u>	<u>49,974.</u>
Total High and Low Service pipe.....		785,419 feet
Total High and Low Service pipe in miles....		148.75

ANNUAL REPORT

OF THE

Births, Marriages and Deaths

OF THE

CITY OF LOWELL

For the Year 1911



LOWELL, MASS.
MC CARTHY THE PRINTER
1912

CITY OF LOWELL

IN MUNICIPAL COUNCIL,
March 19, 1912.

Received and ordered on file.

STEPHEN FLYNN,
City Clerk.

CITY OF LOWELL

CITY CLERK'S OFFICE,
March 15, 1912.

TO THE HONORABLE MUNICIPAL COUNCIL.

GENTLEMEN :

I have the honor to present you the annual report of Births, Marriages and Deaths for the year 1911, as of record in this office, to wit :

BIRTHS

	By Wards—	1	2	3	4	5	6	7	8	8	Total
Whole Number - - - - -	164	378	264	253	247	698	201	163	184		2552
Males - - - - -	88	181	136	121	120	359	96	78	90		1269
Females - - - - -	76	197	128	132	127	339	105	85	94		1283
American Parents - - -	46	50	94	57	54	82	55	73	68		579
Foreign Parents - - - -	83	285	114	147	164	473	88	46	63		1463
American Father, Foreign Mother - - -	17	28	33	24	14	67	26	24	25		258
Foreign Father, American Mother - -	18	15	23	25	15	76	32	20	28		252
Twins - - - - -	1	4	5	1	1	9	1		3		25
Triplets - - - - -				1							1

In addition to the above there are recorded the births of seventeen children born in Lowell of parents resident elsewhere, and nine born elsewhere of Lowell parents.

Still-births, not included, 125.

MARRIAGES.

Ten hundred and forty-one notices of intention of marriage were received and entered in 1911, and ten hundred and thirty-five marriages recorded, nine hundred and thirty-eight being solemnized in Lowell and ninety-seven solemnized elsewhere.

MARRIAGES BY MONTHS

January - - -	67	May - - -	78	September - - -	98
February - - -	74	June - - -	164	October - - -	116
March - - -	23	July - - -	81	November - - -	127
April - - -	89	August - - -	64	December - - -	54

NATIONALITY OF PARTIES

	GROOMS	BRIDES
United States - - - - -	492	500
Canada - - - - -	125	117
Ireland - - - - -	66	85
Russia - - - - -	64	56
Austria - - - - -	52	59
Greece - - - - -	70	65
England - - - - -	48	44
British Provinces - - - - -	41	38
Portugal and Western Islands - - - - -	33	32
Sweden - - - - -	14	14
Scotland - - - - -	7	8
Other Countries - - - - -	23	17
Oldest couple married - - - - -	Groom 67 yrs.	Bride 58 yrs.
Youngest couple married - - - - -	Groom 18 yrs.	Bride 16 yrs.
Oldest person married 71 yrs.	Youngest person married 14 yrs.	
Grooms under 21 yrs. - - - - -	69	Brides under 18 yrs. - - - 23

DEATHS

The total number of deaths returned and recorded in the City Clerk's office for the year 1911, exclusive of still-births, was 1999, of which number 74 were residents of Lowell who died elsewhere, making the number of deaths returned and recorded as having occurred in Lowell (49 of which were of non-residents) 1925.

Males	-	-	-	-	-	-	-	-	-	-	-	-	983
Females	-	-	-	-	-	-	-	-	-	-	-	-	942
Persons between 80 and 90 years of age	-	-	-	-	-	-	-	-	-	-	-	-	98
Persons over 90 years	-	-	-	-	-	-	-	-	-	-	-	-	12
Still-births	-	-	-	-	-	-	-	-	-	-	-	-	125

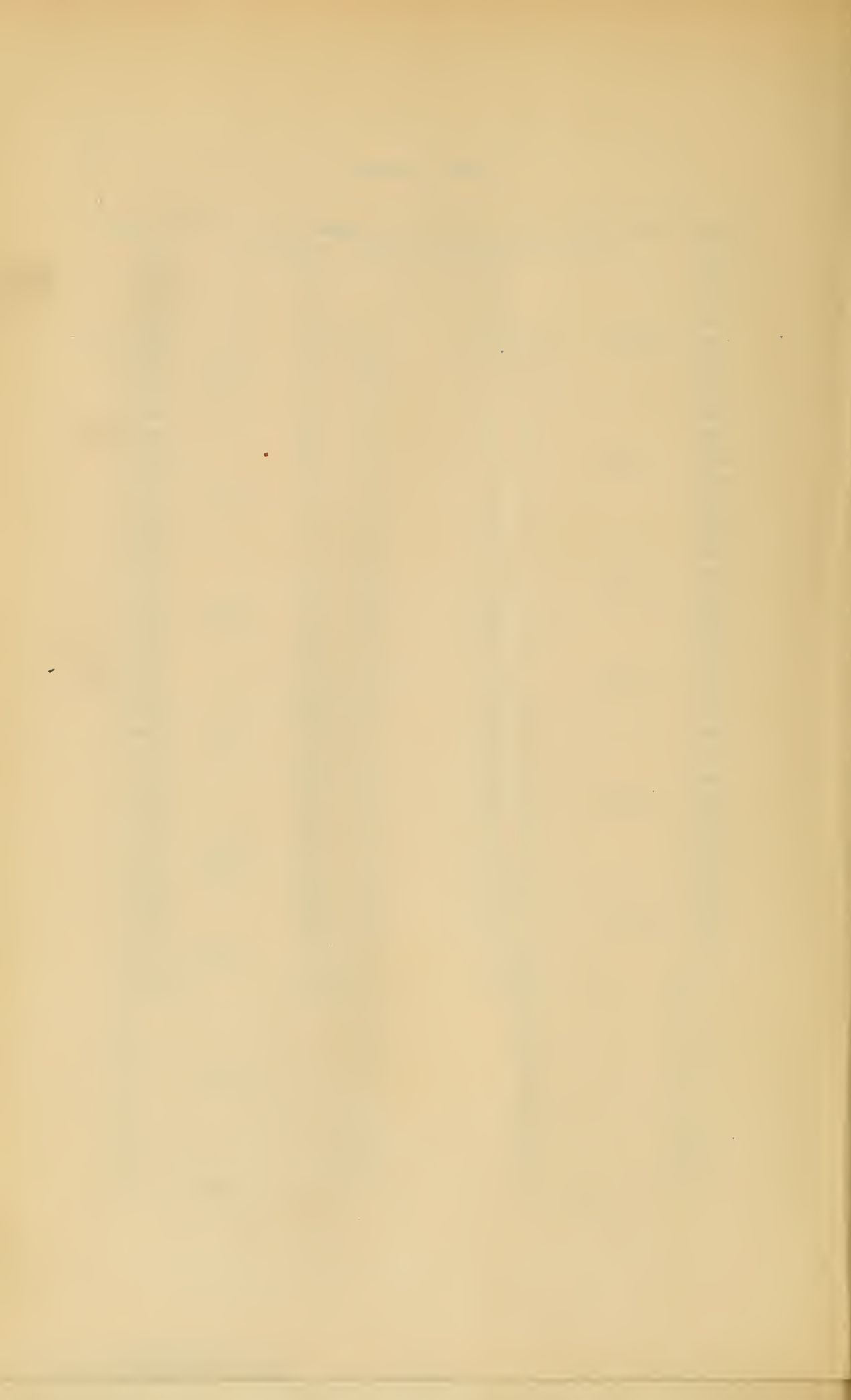
Statistics in greater detail may be found in the annual report of the Board of Health.

Respectfully submitted,
STEPHEN FLYNN,
City Clerk.

TABLE GIVING THE NUMBER OF BIRTHS, MARRIAGES AND DEATHS
IN LOWELL SINCE ITS INCORPORATION

YEAR	POPULATION	BIRTHS	MARRIAGES	DEATHS
1826-1843		Est. 5010	Est. 4500	Est. 4186
1844	25,163	662	319	362
1845		660	399	363
1846	29,127	772	591	690
1847		719	659	949
1848		796	516	825
1849		672	320	903
1850	33,383	966	674	492
1851		1018	669	629
1852		1007	669	604
1853		1093	742	734
1854		1092	808	834
1855	37,554	1039	687	766
1856		1034	632	790
1857		1051	585	818
1858		827	467	626
1859		983	496	739
1860	36,827	1077	497	720
1861		949	459	713
1862		763	368	641
1863		657	302	695
1864		658	335	633
1865	30,990	672	406	575
1866	36,878	813	625	749
1867		826	596	640
1868		860	495	857
1869		858	575	763
1870	40,928	926	515	952
1871		886	647	1033
1872		1099	670	1048
1873		1365	705	1161
1874		1356	580	1184
1875	49,688	1296	513	1020
1876		1264	514	1147
1877		1341	552	1029
1878		1332	546	1088
1879		1412	635	1006
1880	59,485	1770	744	1312

YEAR	POPULATION	BIRTHS	MARRIAGES	DEATHS
1881		1840	786	1287
1882		1755	813	1322
1883		1681	848	1432
1884		1786	735	1401
1885	64,107	1769	707	1328
1886		1813	813	1499
1887		1835	873	1872
1888		1886	886	1763
1889		2133	965	1894
1890	77,696	2175	979	1960
1891		2203	944	1976
1892		2714	941	2228
1893		2688	955	2108
1894		2764	793	1790
1895	84,359	2772	978	1898
1896		2805	854	1896
1897		2622	866	1882
1898		2422	962	1835
1899		2419	1015	1880
1900	94,969	2574	1135	1852
1901		2770	1022	2042
1902		2496	1075	1944
1903		2514	1026	1897
1904		2515	1065	1736
1905	94,889	2513	981	1899
1906		2550	1125	1919
1907		2689	1055	2063
1908		2730	860	1963
1909		2631	1022	1885
1910	106,294	2609	1065	2100
1911		2552	1035	1999
		<hr/> 114,806	<hr/> 54,191	<hr/> 90,826



THIRTY-FOURTH

ANNUAL REPORT

OF THE

BOARD OF HEALTH

OF THE

CITY OF LOWELL

For the Year 1911



UNION PRINTING COMPANY
LOWELL, MASS.



ORGANIZATION, 1911

BOARD OF HEALTH

DENNIS J. MURPHY, Esq., CHAIRMAN

JOHN A. OSGOOD

G. FORREST MARTIN, M. D., to Feb. 6, 1911

PIERRE BRUNELLE, M. D., from Feb. 6, 1911

FRANCIS J. O'HARE, SECRETARY

HEALTH DEPARTMENT OFFICERS

OFFICE EMPLOYEES

FREDERICK A. BATES, Agent

THOMAS B. SMITH, M. D., Bacteriologist

WILLIAM A. JOHNSON, M. D., Physician

KATHARINE W. SNOW, Registrar

EMMA E. HURLEY, Temporary Clerk

INSPECTORS

FRANCIS J. O'HARE, Inspector of Contagious Diseases

STEPHEN GARRITY, Plumbing Inspector

WILLIAM H. CONNORS, Inspector of Plumbing and Tenement Houses

JOHN KEARNEY, Health inspector

CLEMENT A. HAMBLET, V. S., Inspector Meat and Provisions

MILK DEPARTMENT

MELVIN F. MASTER, Milk Inspector

JAMES E. HILL, Collector

PRIVATE SCHOOL PHYSICIANS

DR. HOWARD W. JEWETT

DR. RODRIQUE MIGNAULT

DR. FREDERICK P. MURPHY

DR. MICHAEL A. TIGHE



REPORT

LOWELL, MASS., January, 1912.

To the Municipal Council of the City of Lowell.

GENTLEMEN : —

The thirty-fourth annual report of the Board of Health of Lowell is herewith respectfully submitted.

The Board was duly organized Feb. 3d, 1911 by choosing Dennis J. Murphy, Chairman, John A. Osgood and Dr. G. Forrest Martin continuing as other members until Feb. 6th, 1911 when Dr. Pierre Brunelle was elected to succeed Dr. Martin.

On Feb. 9th a case of diphtheria was reported from the family of Alfred Richardson of Dracut. Mr. Richardson who is a milk raiser was ordered to discontinue sending milk to Lowell until satisfactory arrangements had been made with the Board for the removal of the cows from his farm, and the premises thoroughly cleaned and disinfected.

At a meeting of the Board held Mar. 14th, it was voted that the practice of leaving a postal card at houses where there are cases of contagious diseases, the purpose of which is to notify the Board of Health as to the time of disinfecting the premises, be discontinued from the fact that this postal card if taken from an infected house to be deposited into a letter box before the premises are disinfected, is, of itself evidence of the possibilities of the danger of spreading disease through the mails.

It was also voted that the Police Station be made a depot for the issuing of antitoxin to physicians during such hours as the Board of Health office is closed.

On April 14th, the following motion was passed:

"In compliance with the Acts of 1908, Chapter 381, "AN ACT RELATIVE TO THE USE BY THE PUBLIC OF MUTOSCOPIES, LUNG TESTING MACHINES AND SIMILAR APPARATUS", the Board of Health recommends the following:

"That such parts of these instruments that come under the law of Acts of 1908, Chapter 381, Section 1, be dried with a clean cloth or absorbent cotton immediately after having been thoroughly rubbed clean with a smooth cloth or absorbent cotton saturated with one the following solutions:

Diluted Alcohol, 50%; Creolin Solution, 2% (approximately $\frac{1}{2}$ a tablespoonful to a pint of water.

Carbolic Acid Solution, 2%; Corrosive Sublimate Solution, 1-2000 (one tablet $7\frac{1}{2}$ gr. Hg. Cl₂ and $7\frac{1}{2}$ gr. NH₄ Cl in a quart of water. This last solution is corrosive, and not intended to be used on metallic substances)."

On June 9th, the Board of Health made the following suggestions to householders for the care and handling of milk, particularly during the summer months:

IMPORTANT TO HOUSEHOLDER

(Keeping Milk Cool)

Milk should be the only food of infants under one year of age. If the cow, the milker and the utensils in which milk is received and kept, are clean, and the milk is kept cold — below 50o Fahrenheit — milk should go into the home in a clean and healthful condition. Milk is one of the most perishable of all foods. If milk is kept in a warm room when received in the home, it will rapidly turn into a poor food even before it goes sour. Therefore it should be placed on ice immediately upon being received and kept in the coolest part of the house.

(Cheap Ice-Box)

This is not an expensive procedure, nor is a refrigerator a necessity. The Phipps Institute for the treatment of tuberculosis employs a method of keeping milk at cost of two cents per day, which can be used by anyone. It consists of a soap box, or similar box, in the centre of which is placed a kettle or can, which is deep enough to cover the neck of the milk jar. The space about the kettle is packed with sawdust. The jar of milk is placed in the centre of the kettle, and two cents worth of ice is placed in the kettle, about the jar. The box is then covered with a clean, heavy cloth of several thicknesses.

(Care of milk after jar is opened)

When it is necessary to remove any of the milk for use, the jar is wiped off with a clean cloth, the cap is carefully removed and the amount of milk needed, is poured out. The cap is then replaced or a clean glass placed over the top of the jar, and the jar again put into the box. In this way the milk can be perfectly preserved until used.

(Cleaning and Care of Milk Jars)

After the jar is emptied, it should be rinsed in cold water and then thoroughly scalded with boiling water, and turned upside down in a clean place until called for by the milkman. Insist upon it that the milkman removes his milk jars each day, and under no circumstances use milk jars for any other purposes than holding milk.

(Care of Refrigerators)

If a refrigerator is used for keeping milk, always have it sweet and clean. It should be inspected at least once a week. See that the outlet for melted ice is kept open and that the space under the ice rack is kept clean. The space in which other food is kept, should be scalded at least once a week with a washing soda solution. A single drop of spilled milk or a small particle of spoiled food will contaminate a refrigerator in a few days and cause the milk to take on a disagreeable taste.

(Care of Vessels in which Milk is used for Drinking)

All utensils in which milk is placed for drinking should be perfectly clean, and they should be rinsed in cold water, washed with soap and water, and scalded in boiling water immediately after being used.

(Protection of Milk from Odor of Foods)

After a portion of the milk has been removed from the jar, cover the jar, either with the cap which has been removed or with an inverted glass. Never put an open jar in a refrigerator with food of any kind, especially strong smelling foods like fish, cabbage or onions, as the milk will quickly take up the odor of these foods and have a disagreeable taste, and it may become contaminated.

(Do not pour Milk back into Jar after once removing it)

Keep milk in the milk bottle until needed for immediate use. Do not pour back into the bottle which has been removed and exposed to the air. To do this will spoil the rest of the milk.

(Care of Bottles and Nipples used in Feeding Babies)

Bottles used for feeding babies should be cleaned in the same manner as other milk utensils immediately after being used, and should then be turned upside down and kept in a clean place, away from dust and flies, until needed again. The nipples should be turned inside out, washed in cold water, then in hot water containing a small amount of washing soda, after which they should be placed in boiling water and kept there, the whole being removed to a clean place, away from dust and flies, until used again. Never use a rubber tube between nipple and bottle, as it is impossible to keep clean.

(Care of Bottles when Contagious Disease Develops)

If a case of typhoid fever, scarlet fever, diphtheria, small-pox or cerebro-spinal meningitis or other communicable disease develops in the family, do not take the milk bottles into the patient's room, and do not return any bottles to the milk-

man until the representative of the Board of Health disinfects the bottles and grants permission for their return.

(Care of Cream, etc.)

Cream, skimmed milk, buttermilk, condensed milk or evaporated milk should be treated in exactly the same way as ordinary milk.

On July 6th, 1911, the following communication was received from the City Engineer:

"At a meeting of the Committee on Sewers, held Wednesday, July 5th, the condition of the Merrimack River between Pawtucket Falls and Hunt's Falls was discussed. Between these points a number of sewer outlets empty into the river, and for this reason, in the opinion of the Committee bathing and fishing within these limits should be prohibited.

With this idea in mind, the Committee on Sewers voted to recommend to the Board of Health that the proper authorities be notified, so that some action may be taken in the matter."

The Board of Health made a tour of inspection of all outlets of sewers entering into the Merrimack River, and on July 22d, 1911, the following communication was sent to the Mayor and City Council:

"On Tuesday afternoon last, July 18th, the Board of Health made a thorough inspection of all outlets of sewers entering into the Merrimack River, and on the whole the Board found all sewer outlets to be in a deplorable condition. Many of the said sewers emptied upon dry ground at a distance of from 20 to 100 feet from the river; others emptying into the river leaving an open space of from five to six feet. The Board, in its investigation, with perhaps two or three exceptions, found almost every sewer outlet exposed. The conditions surrounding many of these sewer outlets were disgusting, and emitted foul and noxious smells which were a source of great annoyance to occupants of property within the vicinity of said sewers.

The Board believes that the sewers entering the Merri-

mack River at the foot of Broughton Ave., Fulton St., West St., Beaver St., Campaw St., Ottawa St., Alder St., Wentworth Ave., and Aiken St., under the bridge, are a nuisance, a source of filth, and a danger to the public health.

The Board believes that the City of Lowell should immediately take measures to abate this nuisance, and particular attention given at once to the Broughton Ave., Fulton St., and West St., sewers, also the sewer under the Aiken St., bridge, and have these nuisances abated at once. These sewers in the opinion of the Board, should be extended far enough out into the channel of the Merrimack River that all noxious matter should be carried down the stream, and not be exposed, as conditions are at the present time during low water, and it is therefore moved that the attention of the City Government should be called to the fact that the outlets of these sewers are a nuisance, and dangerous to public health, and said nuisances should be abated."

As nothing was done in response to this letter, on Aug. 11th, a legal notice was served on the Mayor, ordering him to abate this nuisance at once.

In 1911 the following Act was passed by the Legislature:

Acts of 1911, Chapter 596.

AN ACT TO PROVIDE FOR THE CONSTRUCTION OF SANITARY STATIONS IN CITIES AND CERTAIN TOWNS.

Section 1. In every city and in all towns having a population of over ten thousand inhabitants, there shall be provided in some convenient place or places, at or near the business centre of the city or town, one or more sanitary stations with separate water closets for the use of both sexes, which sanitary stations shall be established and maintained by the city or town in which they are located. The number and the location of said sanitary stations shall be determined for every city, and for every such town, by the local board of health; provided, however, that if in the opinion of the board of health

of any city or town such sanitary stations are not necessary in that city or town such city or town shall not be required to provide the same.

Section 2. This act shall take effect on the first day of September, nineteen hundred and eleven.

After reports had been made to the Board of Health regarding the unsanitary conditions existing in Lowell at the present time, the Board recommended to the City Government that immediate steps be taken to comply with this act.

On Sept. 26th, 1911, a case of diphtheria was reported from the dairy farm of C. A. Bell of Tyngsboro. After an inspection of the premises by the members of the Board, the milk supply of this farm was stopped, until the recovery of the case, and the house and premises disinfected to the approval of the Lowell Board of Health.

There were four prosecutions during the year for men collecting swill without a license to do so from the Board of Health, and several were summoned before the Board and warned to discontinue this practice.

During the year 1911, the deaths of children one year of age and younger was 484. This was 25 p. c. of the total deaths at all ages. It was also 123 less than in 1910, a decrease of 20 p. c.

Of the 484 babies who died at the age of one year or younger, 207 or about 42 p. c. died of gastro-intestinal diseases. This was 24 or 10 p. c. less than in 1910. Of the 207 who died of gastro-intestinal diseases, 159 died during the months of June, July, August and September.

To secure some additional data in this connection, this department sent out 343 reply cards. Part of these were sent to the parents of the 159 babies who died last summer, and part to the parents of 127 babies who were about four months old. From the replies it was ascertained that the 127 well babies were being fed as follows: 68 p. c. at the breast, 15 p. c. with patent foods, 13 p. c. cow's milk, and 4 p. c. condensed milk. The replies from the parents of the 159 babies who died

last summer indicated that 50 p. c. were fed with cow's milk, 16 p. c. with patent foods, 14 p. c. condensed milk, 13 p. c. were fed at the breast, and 7 p. c. unclassified.

It may safely be said that 68 p. c. of our babies are fed on mothers' milk up to the age of four months at least, and that 32 p. c. are fed on artificial foods. This is a remarkably good record as to the ability of our mothers to perform this important function.

According to the above data, the mortality last summer of infants in Lowell who were bottle-fed was at least 14 times as great as among those who were breast-fed.

It is also a significant fact that 87 p. c. of all the infants who died in Lowell last summer of gastro-intestinal diseases, were artificially fed, and that of those artificially fed, 57 p. c. were fed on cows' milk.

The Board of Health and the Health Department for the year 1911 has had but one end in view, and that has been the welfare of the City of Lowell and the preservation of the health of all its citizens; and in this we have had the conscientious co-operation of our efficient Agent, Mr. Frederick A. Bates, and it is with pleasure that we here publicly commend him. Our inspectors have been courteous and willing at all times to do their full duty in assisting the Board in looking after and preserving the health of our citizens, and the same praise is due to our bacteriologist, our registrar, and our efficient milk inspector.

DENNIS J. MURPHY,

JOHN A. OSGOOD,

PIERRE BRUNELLE, M. D.,

Board of Health.

MEDICAL INSPECTION OF PRIVATE SCHOOLS.

Number of calls	426
Number examined	7154
Number advised	1696
Number excluded	95

The following will give a general idea of the character of the cases examined:

Anaemia	17	cases
Adenitis	9	"
Adenitis (Cervical)	10	"
Atrophic Rhinitis	3	"
Abscess	4	"
Blepharitis	4	"
Bronchitis	20	"
Conjunctivitis	3	"
Carious Teeth	151	"
Chorea	12	"
Chalazion	4	"
Chlorosis	1	"
Defective Vision	56	"
Defective Hearing	5	"
Deviated Septum	2	"
Enlarged Tonsils and Adenoids	207	"
Eczema	9	"
Earache	2	"
Enlarged Thyroid	2	"
Foreign body in eye	2	"
Fainting Spells	1	"
Furunculosis	3	"
Headaches	17	"
Impacted Cerumen	32	"
Impetigo	2	"
Infection of Finger	1	"
Ivy Poison	2	"
Inflammation of Eyelids	2	"

Keratitis	1 cases
Myopia	2 "
Malnutrition	1 "
Nits	44 "
Nasal Obstruction	4 "
Nose Bleed	1 "
Neuralgia	1 "
Otitis Media	5 "
Pleurisy	1 "
Pediculosis	18 "
Not vaccinated	246 "
Pyorrhea	2 "
Ranula	2 "
Ringworm	2 "
Strabismus	8 "
Salt Rheum	1 "
Sty	1 "
Sore Throat	1 "
Scabies	2 "
Septic Knee	1 "
Staphylococcus Infection of Face	4 "
Tonsillitis	1 "
Tosis of ears	2 "
Tosis of eyelid	1 "
Tuberculosis	1 "
Tuberculous Glands	2 "
Ulcer of Cornea	1 "
Valvular Disease of Heart	2 "
Wen	3 "
Warts	2 "

Children were excluded from school for the following causes:

Chalazion	1 cases
Chorea	4 "
Cornea	1 "
Exposure to Diphtheria	1 "

Excessive Nervousness	1 cases
Failure to wear glasses	1 "
Favus	4 "
Headache	2 "
Impetigo	9 "
Keratitis	1 "
Measles	1 "
Nose Bleed	1 "
Otitis Media	1 "
Sore Throats	12 "
Scrofula	1 "
Scabies	1 "
Scarlet Fever cases found peeling	4 "
Suspected Scarlet Fever cases	2 "
Tuberculosis	5 "
Tonsillitis	3 "
Whooping Cough	4 "

Six cultures were taken during the year, and one of the school physicians was called to attend a boy suffering from concussion of brain. The boy was sent to the hospital.

The following recommendations were made by the physicians:

Regulation of height of desks for pupils.

Glasses changed.

Ventilation of Schoolrooms.

In one case where 83 children occupy a basement school-room lighted by gas all the time, it was recommended that the room be discontinued for school purposes.

It was recommended that the district nurse assist the school physicians and teachers in seeing that suggestions are carried out.

INSPECTOR OF MILK

TO THE LOWELL BOARD OF HEALTH,
LOWELL, MASS.

Gentlemen :

I have the honor to present the report of the Department of Milk, Vinegar and Oleomargarine Inspection for the twelve months, beginning Jan. 1st, 1911.

Twenty- four hundred and seventy-three (2473) samples of milk have been analyzed chemically for the percentage of total solids and butterfat. All samples were closely inspected for the presence of preservatives, coloring matter and added water. By means of the Zeiss Immersion Refractometer, copper serum solids, and sour serum ash, several convictions were obtained against milkmen in Court for added water.

The average milk during the year was above the requirements of the law, but as usual during the summer months numerous milkmen had difficulty in keeping their milk up to the standard. As a result, one hundred and sixty-three notices were sent out, stating that the milk was slightly below the standard, and in several cases the matter was settled in court. Complaints that some of the milk had a bad odor and taste was traced to dairies where food, giving off odors, was fed just previous to milking.

During the year, two hundred and forty-eight samples of milk were examined for the bacterial contents, the counts ranged from 5,000,000— in the summer months to 100,000 in December. In connection with these counts in December, the sediment from a pint of milk was obtained on a cotton disk. A pint bottle of milk was taken from each milkman, sealed and in condition to be delivered to the consumer. The milk from each bottle was then filtered through a separate cotton

disk and the mechanical impurities were thus collected on a rather small area. The results were rather startling in some cases.

After the cotton disks were dried, an examination was made. The mechanical impurities were found in some cases to consist of small pieces of hay or straw, hay chaff, hair, dirt and stable refuse. The enumerated impurities had passed through the strainer cloths of the producer and the milk dealer. It seems to me that if cotton had been used by the producer and the milk dealer through which to strain the milk, that very little, if any of these mechanical impurities would reach the consumer and the stomachs of the infants. The presence of these impurities also indicates the careless methods employed by the producer in handling his milk, while the milk dealers may be responsible to a certain extent for these impurities, most of them are handling their milk in a sanitary manner, and it would be impossible for some of these impurities to creep into the milk at any other place than at the producers.

Inspection of Stores.

During the month of February, eleven hundred application blanks for milk licenses were mailed to every store in the city where milk might be sold. Several hundred replies were received. In March almost every store in Lowell where milk might be sold was visited and licenses granted where conditions were satisfactory. There were a few violations of the Board of Health rules and regulations, but with few exceptions the stores conformed to the milk rules.

Court Cases

There were twenty-one prosecutions during the year.

Vinegar

There were fifty-six samples of vinegar examined during the year. All the seized samples were up to the requirements of the law.

Butter

Several samples of butter were tested but all were as re-

presented. There was one conviction in the Superior Court, on two counts, for selling oleomargarine for butter.

SUMMARY

Number of licenses to dealers conveying milk by carriage or otherwise for the purpose of sale	106
Number of registrations of store-keepers engaged in the sale of milk	479
Number of oleomargarine licenses	5
<hr/>	
Total number of licenses and registrations	590
Received for licenses and registrations	\$294.50
Stores inspected	479
Stores visited	628
Total number of warnings sent to milkmen	207
Total number of prosecutions and convictions (watered milk, 7, below standard 14)	21

Respectfully submitted,
MELVIN F. MASTER, B. S.,
Inspector of Milk.

INSPECTOR OF MEATS AND PROVISIONS

BOARD OF HEALTH,
LOWELL, MASS.

Gentlemen:

The following is a report of the work done by the Inspector of Meats and Provisions for the year 1911:

Inspection of Stores.

Number of inspections made of stores	7576
Number of instances where conditions in stores were unsatisfactory	75
Number of pieces of meat condemned as unfit for food ..	4

Inspection of Meat at Time of Slaughter

Number of carcasses of swine	416
Number of carcasses of veal	3
Number of carcasses of swine condemned as being tuberculous	4
Number of carcasses of swine condemned as having diseased liver	1

Two (2) cases of glanders in horses were reported to, and condemned by the Cattle Bureau of the State Board of Agriculture, also sixteen (16) dogs either showing symptoms of rabies or having been in contact with rabid dogs were reported to the same authorities and were either ordered killed or quarantined.

C. A. HAMBLET, V. S.,
Meat Inspector.

REPORTS OF PLUMBING INSPECTORS

BOARD OF HEALTH,
LOWELL, MASS.

Gentlemen:

The following is a report of the plumbing work done for the year ending Dec. 31st, 1911:

Whole number of applications for permits to do plumbing	798
New Buildings	211
Old Buildings	587
	<hr/>
Total number of Visits	798
	2382

Respectfully,

STEPHEN GARRITY,

Plumbing Inspector.

BOARD OF HEALTH,
LOWELL, MASS.

Gentlemen:

The following is a report of the tenement house inspection for year ending Dec. 31st, 1911:

Tenements	929
Stores	100
Bakeries	45
Amusement Houses	10

Respectfully,

WILLIAM H. CONNORS,

Plumbing Inspector.

Notices to abate the following nuisances were sent from the office during the year 1911:

Clogged sink waste pipes	9
No water supply to sinks	1
Leaky sink waste pipes	8
Leaky sink traps	6
Untrapped sinks	11
No cover on sink traps	5
Insufficient supply of water to water closets	27
Leaky water closets	15
Dilapidated woodwork around water closets	3
Dilapidated woodwork around sink	3
Filthy barns	3
Leaky water supply pipes	6
Clogged drains	19
Open drains	9
No water supply to water closets	53
Rubbish in cellars	106
Rubbish in yards	135
Defective joints in sink waste pipes	14
Ceilings whitewashed	35
Clogged water closets	16
Filthy water closets	9
Leaky roofs	4
Broken water closet bowls	2
No water supply to tenements	5
Unsealed sink traps	5
Manure in yard	7
Filthy tenements	7
Hens in cellar	1
Improper material for sink waste pipes	1
Surface drainage	3
Water supply pipes frozen	1
Open connections in soil pipes	3
Open joints in back vent pipes	11
Open joints in sink waste pipes	11

Leaky water supply pipes	4
Clogged basins	5
Overflowing ash barrels	2
Untrapped set tubs	1
Filthy garbage cans	1
Pigs ordered removed	3
Rubbish in sheds	3
Rubbish on roofs	1
Leaky water closet tanks	2
Plaster off ceilings	14
Permission granted Joseph Fay to clean vaults	59
Permission granted Joseph Fay to clean dry wells	14
Permission granted Harold Fox to clean vaults	25
Permission granted Harold Fox to clean dry wells	3

CASES OF CONTAGIOUS DISEASES REPORTED

	1911	1910	1909	1908
Diphtheria, including Croup	159	164	205	243
Scarlet Fever	226	304	100	82
Measles	159	1194	333	639
Typhoid Fever	61	186	91	188
Smallpox	0	0	0	1
Cerebro-Spinal Meningitis	15	6	7	14
Infantile Paralysis	18	8	0	0
	<hr/> 638	<hr/> 1862	<hr/> 736	<hr/> 1167

DEATHS FROM CONTAGIOUS DISEASES

	1911	1910	1909	1908
Diphtheria, including Croup	15	20	34	21
Scarlet Fever	5	38	9	2
Measles	8	20	4	5
Typhoid Fever	7	22	11	24
Smallpox	0	0	0	0
Cerebro-Spinal Meningitis	9	6	5	12
Infantile Paralysis	2	0	0	0
	<hr/> 46	<hr/> 106	<hr/> 63	<hr/> 64

In 1911 there were 549 fumigations, 152 of which were for Tuberculosis. In all 1490 rooms were fumigated.

There were 1888 vaccinations.

29 Undertakers' licenses were granted during the year.

CASES OF DIPHTHERIA AND CROUP REPORTED TO THE BOARD OF HEALTH FOR THE YEAR 1911.

	Diphtheria		Croup	
	Cases	Deaths	Cases	Deaths
January	29	2	1	0
February	24	2	1	0
March	17	3	0	0
April	12	0	0	0
May	5	1	1	0
June	12	0	0	0
July	3	0	0	0
August	7	0	0	0
September	3	0	0	0
October	8	1	2	0
November	10	2	0	0
December	24	4	0	0
	<hr/> 154	<hr/> 15	<hr/> 5	<hr/> 0

Mortality of Diphtheria, 9.7 per cent.

MORTALITY OF DIPHTHERIA

	1894	33.0 per cent.
	1895	44.0
Antitoxin Treatment	1896	43.0
	1897	23.0
	1898	23.0
	1899	18.0
	1900	10.0
	1901	12.0
	1902	9.5
	1903	10.5
	1904	11.0
	1905	6.0
	1906	9.0
	1907	7.5
	1908	7.0
	1909	12.5
	1910	9.2
	1911	9.7

LOWELL, MASS., January 1, 1912.

TO THE MEMBERS OF THE BOARD OF HEALTH,
LOWELL, MASS.

Gentlemen:

I have the honor to submit to you the following report of the work done in the Bacteriological Laboratory during the year ending December 31, 1911:

DIPHTHERIA

EXAMINATION OF CULTURES

	For Diagnosis		For Release		No	Whole
	Positive	Negative	Positive	Negative	Result	Number
January	26	49	36	24	0	135
February	26	60	25	24	0	135
March	16	49	35	19	0	119
April	10	40	15	26	0	91
May	10	38	3	8	2	61
June	12	18	4	10	0	44
July	2	14	0	6	0	22
August	7	16	2	4	2	31
September.....	8	35	2	6	1	52
October	9	31	19	12	5	76
November	10	35	10	12	7	74
December	18	40	12	19	1	90
	<hr/> 154	<hr/> 425	<hr/> 163	<hr/> 170	<hr/> 18	<hr/> 930

TUBERCULOSIS

EXAMINATION OF SPUTUM

	Positive	Negative	No Result	Whole Number
January	9	44	1	54
February	7	29		36
March	16	39		55
April	11	47		58
May	15	51		66
June	1	38		39
July	9	21		30
August	2	25		27
September	7	29		36
October	8	25		33
November	8	26		34
December	5	35		40
	98	409	1	508

Specimens of sputum are still sent in from time to time in open or leaking containers, the examination of which has to be declined. Owing to the dangerous character of the work, it is best that all specimens should be sent in, in the outfits furnished by the Board of Health.

TYPHOID FEVER

EXAMINATION OF BLOOD FOR WIDAL REACTION

	Posi- tive	Nega- tive	Whole Number
January	1	17	18
February	7	12	19
March	2	12	14
April	5	34	39
May	2	17	19
June	0	20	20
July	5	19	24
August	11	26	37
September	13	24	37
October	9	22	31
November	7	30	37
December	3	35	38
	65	268	333

MALARIA

Examination of blood for the presence of the malarial parasite. Five specimens were examined, of which two gave positive results.

CEREBRO-SPINAL MENINGITIS

Examination of Cerebro-Spinal fluid obtained by lumbar puncture. Three examinations were made with positive results.

OPHTHALMIA NEONATORUM

Seven specimens of pus from the eyes of new born children were made, four of which showed the presence of gonococci.

GENERAL EXAMINATIONS

Eight specimens of urethral exudate were examined for the presence of gonococcus, six of which gave positive results.

A number of other examinations were made of pathological materials, including pus from otitis media, from wounds, from cases of appendicitis and cholecystitis, cases of conjunctivitis and erysipelas.

Respectfully submitted,

THOMAS B. SMITH, M. D.

Bacteriologist.

Our expense at the Lowell Hospital for 1911 was \$156.25 as compared with \$501.36.

Alice Fanou	\$ 42.00
Georgia Kandiane	34.00
Esther Doyle	7.32
Chas. Kendall	24.00
Ruth Evans	33.00
Hazel Rafferty	2.00
Edith Vancellette	10.00
Joseph Kunski	3.93
	<hr/>
	156.25

SCARLET FEVER

	1911	1910	1909	1908
Cases reported	226	304	100	82
Deaths	5	38	9	2
Per cent total cases	2	12	9	2

	Cases Reported	Deaths
January	24	0
February	22	0
March	14	0
April	8	0
May	18	0
June	3	1
July	4	0
August	2	0
September	15	1
October	29	0
November	42	2
December	45	1
	<hr/>	<hr/>
	226	5

MEASLES

	Reported Cases	Deaths
January	3	0
February	3	0
March	5	0
April	6	0
May	20	0
June	16	0
July	9	0
August	3	0
September	3	0
October	5	0
November	19	1
December	67	7
	<hr/>	<hr/>
	159	8

TYPHOID FEVER

	1911	
	Reported Cases	Deaths
January	0	0
February	7	1
March	1	0
April	1	0
May	3	0
June	2	0
July	3	0
August	11	1
September	13	0
October	10	2
November	6	2
December	4	1
	<hr/>	<hr/>
	61	7

TYPHOID FEVER

	Population	Reported Cases	Deaths
Total 1911	106294	61	7
Total 1910	106294	186	22
Total 1909	96380	91	11
Total 1908	96380	188	24
Total 1907	96380	73	9
Total 1906	96380	30	7
Total 1905	94889	56	17
Total 1904	104402	48	17
Total 1903	101959	238	26
Total 1902	99574	83	16
Total 1901	94969	70	18
Total 1900	94969	85	17
Total 1899	90114	57	17
Total 1898	87000	119	24
Total 1897	87000	105	18
Total 1896	95700	178	36
Total 1895	84359	172	33
Total 1894	83026	282	50
Total 1893	81694	160	53
Total 1892	80361	373	75
Total 1891	79029	293	77
Total 1890	77696	454	123

A decrease from 1.59 per thousand inhabitants to .06 in twenty-two years.

PLACES OF DEATH

Ward 1	1
Ward 6	1
Ward 8	1
Ward 9	1
Lowell Hospital	1
St. John's Hospital	2
	<hr/>
	7

Males, 3

Females, 4

Oldest, 47

Youngest, 17

DEATHS FROM CHOLERA INFANTUM

	1911	1910	1909	1908
January	0	0	0	1
February	0	0	0	0
March	0	0	0	0
	<hr/>	<hr/>	<hr/>	<hr/>
Total first quarter	0	0	0	1
April	0	0	0	1
May	1	0	0	0
June	7	8	1	5
	<hr/>	<hr/>	<hr/>	<hr/>
Total second quarter	8	8	1	6
July	46	63	19	48
August	16	19	25	30
September	1	3	16	18
	<hr/>	<hr/>	<hr/>	<hr/>
Total third quarter	63	85	60	96
October	1	2	3	7
November	0	0	0	0
December	0	0	0	0
	<hr/>	<hr/>	<hr/>	<hr/>
Total fourth quarter	1	2	3	7
Total for year	72	95	64	110

VITAL STATISTICS

	1911	1910	1909	1908
Deaths, male	985	1045	922	994
Deaths, female	940	1055	963	969
	<hr/>	<hr/>	<hr/>	<hr/>
	1925	2100	1885	1963
Children under 1 year	484	607	494	554
Children under 2 years	581	735	593	663
Children under 5 years	648	835	671	750
Per cent of total deaths				
under 5 years	33.6	39.8	35.6	38.2

BIRTHPLACE

	Of Deceased	Of Parents
Lowell	833	198
Massachusetts	115	171
Other States	264	474
Ireland	335	1082
Canada	176	821
Great Britain	117	325
Other Countries	74	527
Unknown	11	252
	<hr/> 1925	<hr/> 3850

PLACES OF DEATH

Ward 1	152
Ward 2	217
Ward 3	159
Ward 4	157
Ward 5	167
Ward 6	336
Ward 7	128
Ward 8	118
Ward 9	107
Chelmsford St. Hospital	109
Lowell Hospital	95
Lowell General Hospital	82
St. John's Hospital	98
	<hr/> 1925

PLACES OF INTERMENT

St Patrick's Cemetery	774
Edson	428
Westlawn	31
Lowell	72
St. Joseph's	397
St. Peter's	34
Removed	189
	<hr/> 1925

Still Births during year, 124.

DEATH RATE

	Year	Population	Deaths	Death Rate
Population, census	1890	77,696	1959	25.21
estimated	1891	79,029	1972	24.95
estimated	1892	80,361	2224	27.67
estimated	1893	81,694	2094	25.62
estimated	1894	83,026	1775	21.28
census	1895	84,359	1857	22.01
estimated	1896	85,700	1901	22.18
estimated	1897	87,000	1855	21.33
estimated	1898	87,000	1808	20.78
estimated	1899	90,114	1848	20.50
census	1900	94,969	1849	19.47
estimated	1901	94,969	2038	21.45
estimated	1902	99,574	1935	19.43
estimated	1903	101,959	1898	18.61
estimated	1904	104,402	1736	16.61
census	1905	94,889	1899	20.02
census	1906	96,380	1918	19.90
census	1907	96,380	2063	21.40
census	1908	96,380	1963	20.36
census	1909	96,380	1885	19.55
census	1910	106,294	2100	19.76
census	1911	106,294	1925	18.11

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[illegible]

CAUSES OF DEATH	TOTAL FOR 1911	AGE																				SEX																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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		Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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CAUSES OF DEATH	TOTAL FOR 1911	AGE																SEX								
																		Males	Females							
		Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over	
DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SENSE—Continued.																										
64 Cerebral congestion and hemorrhage	101	1	...	...	...	...	1	...	...	...	1	1	3	1	8	9	8	11	18	24	11	2	2	1		
65 Cerebral softening .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
66 Infantile Paralysis	2	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
67 Paralysis, without cause assigned	18	1	...	...	...	1	...	...	...	...	1	...	...	1	1	2	...	2	3	3	3	1	...	...	...
68 General paralysis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
69 Other forms of mental alienation .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
70 Epilepsy	3	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...
71 Eclampsia (non-puerperal) ..	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
72 Convulsions of children	23	20	1	2	...	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
73 Tetanus	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
74 Chorea .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
75 Hysteria .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
75b Other affections of the nervous system	10	2	...	...	...	2	...	1	1	1	...	1	...	1	...	...	...	1	1	1	...	1	...	...	...

CAUSES OF DEATH	TOTAL FOR 1911	AGE																			SEX						
		Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over		
		Males	Females																								
DISEASES OF THE RESPIRATORY APPARATUS—Concluded.																											
96 Pulmonary congestion and apoplexy	21	1	1	...	...	2	...	...	...	...	1	1	1	1	1	...	1	3	2	5	1	2	1	...	...	7	14
97 Gangrene of the lung	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...
98 Asthma	4	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	1	...	1	...	...	...	2	2
99 Emphysema, pulmonary. ..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...
100 Other diseases of the respiratory apparatus (phthisis excepted).....	6	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	1	...	...	1	...	1	...	...	...	2	4
Total respiratory apparatus..	284	65	33	12	5	2	117	7	2	3	1	10	9	10	9	12	9	12	16	21	16	14	12	4	....	152	132
V. DISEASES OF THE DIGESTIVE APPARATUS.																											
101 Affections of the mouth and its adnexa.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
102 Affections of the pharynx...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
103 Affections of the esophagus.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...
104 Ulcer of the stomach.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
105 Other affections of the stomach (cancer excepted)	12	4	...	...	...	4	...	...	...	...	...	...	2	...	...	...	...	...	...	2	1	...	...	...	...	3	9

CAUSES OF DEATH	TOTAL FOR 1911	AGE																				SEX				
																						Males	Females			
		Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over	
VII. PUERPERAL STATE.	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1
135 Accidents of pregnancy....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
136 Hemorrhage, puerperal....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
137 Other accidents of labor....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
138 Septicemia, puerperal.....	7	....	....	....	....	....	2	1	1	2	1	2	1	....	....	....	....	....	....	....	....	....	....	....	....	7
139 Albuminuria and puerperal eclampsia.....	6	....	....	....	....	....	....	....	1	2	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	6
140 Phlegmasia alba dolens, puerperal.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
141 Other puerperal accidents--sudden death.....	2	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
142 Puerperal diseases of the breast.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total puerperal.....	16	....	....	....	....	....	2	2	5	4	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	16
VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.																										
143 Gangrene.....	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1	2	....	....	....	1 3
144 Furuncle (carbuncle).....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
145 Phlegmon, warm abscess....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1

CAUSES OF DEATH	TOTAL FOR 1911	AGE																				SEX							
		Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over	Males	Females		
AFFECTIONS PRODUCED BY EXTERNAL CAUSES—Concluded.																													
175 Absorption of deleterious gases (suicide excepted) . . .	3	1	1	1	1	2
176 Other acute poisonings	5	...	1	...	1	...	2	1	1	1	2	3
177 Other external violence	2	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
Total affections, etc	161	18	3	2	3	1	27	6	4	4	4	10	12	8	15	7	14	10	10	9	8	4	2	7	...	107	54		
XIV. ILL-DEFINED DISEASES.																													
178 Dropsy . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
179 Sudden death . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
180 Non-specified or ill-defined causes of death	8	4	1	1	...	...	6	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	4	4	
Total ill-defined diseases	8	4	1	1	...	...	6	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	4	4	
TOTAL FROM ALL CAUSES	1925	484	97	36	21	10	648	33	18	36	55	72	64	89	80	82	99	104	110	127	119	78	52	46	13	985	940		

COLLECTION OF ASHES

	1911	1910	1909	1908
Jan	2,519 loads	2,021 loads	2,015 loads	2,162 loads
Feb	1,932	1,681	1,881	2,010
Mar	2,605	2,609	2,264	2,247
Apr	2,554	2,214	2,389	2,321
May	2,230	1,875	1,969	1,953
June	1,862	1,731	1,725	1,739
July	1,667	1,570	1,624	1,610
Aug	1,681	1,591	1,477	1,439
Sept	1,605	1,571	1,422	1,524
Oct	1,904	1,736	1,789	1,750
Nov	2,292	2,101	1,962	1,829
Dec	2,421	2,651	2,236	2,234
	<hr/> 25,272	<hr/> 23,351	<hr/> 22,753	<hr/> 22,718

COST OF COLLECTION

	Labor Pay Roll
1891	\$ 8,000.19
1892	9,857.42
1893	11,542.94
1894	12,087.93
1895	10,591.40
1896	11,311.25
1897	12,793.15
1898	11,209.70
1899	10,903.30
1900	10,665.36
1901	10,651.28
1902	10,454.80
1903	9,691.50
1904	10,714.95
1905	11,035.00
1906	10,771.75

1907	10,747.55
1908	11,212.60
1909	11,431.05
1910	12,986.64
1911	14,365.15
351 loads of paper were collected.	

AMOUNT OF REFUSE BURNED AT CREMATOR
IN 1911.

1,341 tons refuse from meat and fish markets.
 36 dogs.
 42 cats.
 118 mattresses.
 15 bundles bed clothing.
 40 pillows.
 10 pigs.

NUMBER OF LOADS SWILL COLLECTED

	1911	1910	1909	1908
Jan	398 loads	396 loads	362 loads	404½ loads
Feb	371½	343	336	371½
Mar	391	376	370	367
Apr	328	351	343	352
May	399½	365	339	348½
June	415	384	373	373½
July	375¼	364½	376	385½
Aug.	515	467½	466	488
Sept	560	542½	549½	490½
Oct	438	430	448½	414½
Nov	386	388½	388	349
Dec	402	438½	386½	394
	<hr/> 4,979¼	<hr/> 4,846½	<hr/> 4,737½	<hr/> 4,738½

Total collections for 1911	4,979 $\frac{1}{4}$ loads
1910	4,846 $\frac{1}{2}$
1909	4,737 $\frac{1}{2}$
1908	4,738 $\frac{1}{2}$
1907	4,8701-3
1906	4,653 $\frac{1}{2}$
1905	4,323
1904	4,352
1903	4,031
1902	4,035
1901	3,861
1900	4,217

SWILL ACCOUNT

	1911	1910	1909	1908
Jan	\$ 446.26	\$ 440.62	\$ 425.62	\$ 489.43
Feb	410.63	378.75	391.26	435.67
Mar	431.26	421.25	427.50	441.26
Apr	360.01	397.50	395.00	420.00
May	443.15	411.26	391.25	416.88
June	465.03	437.54	429.38	446.90
July	412.92	410.58	433.76	458.16
Aug	566.31	531.83	535.64	581.26
Sept	612.53	633.11	635.01	584.39
Oct	465.05	489.98	520.64	491.89
Nov	406.88	438.11	446.28	421.26
Dec	425.03	495.61	435.01	472.51
Swill Licenses	505.00	525.00	460.00	480.00
	<hr/> 5,950.06	<hr/> 6,011.14	<hr/> 5,926.35	<hr/> 6,139.61

623 $\frac{1}{2}$ loads were charged to the City Farm in 1911.
 93 Swill Licenses were issued during the year.

Cost of Collecting Swill Labor Pay Roll	Disposition of Swill	Income from Swill	Cost of Burning	Amount Burned	Total Cost Collection and Cremation of Swill and Garbage
1884 No Analysis	Sold	\$2,671.85			
1885 " "	"	3,711.38			
1886 " "	"	4,711.38			
1887 " "	"	3,604.00			
1888 " "	"	2,739.85			
1889 " "	"	2,948.52			
1890 " "	"	3,166.00			
1891 \$6,000.00	"	3,945.57			
1892 5,593.02	Burned	3,239.92	Cost of Cremator (\$8,000.00)		\$13,593.02
1893 7,022.66	"		7,670.69	3500 tons	14,693.43
1894 7,122.00	"		5,742.77	3486 "	12,864.69
1895 7,035.97	"		3,662.53	2750 "	10,698.50
1896 7,064.97	"		3,543.34	2810 "	10,408.01
1897 7,234.76	Part Burned	2,369.99	2,612.07	2629 "	9,846.07
1898 7,758.20	and	2,445.40	1,644.21	874 "	9,302.41
1899 7,193.30	Part Sold	3,547.00	1,397.86	105 "	8,591.16
1900 7,083.30	All Sold	{ Cash Hay 3,368.00 840.72	1,094.65	109 "	8,177.95

1901	\$7,027.75	All Sold	{ Cash \$2,835.20 Buggy 83.00 Manure 32.00 Hay 780.04 }	\$1,081.14	{ 35 tons 317 tons } Markets	\$ 7,404.64
1902	7,259.00	"	{ Cash 3,244.72 Hay 883.77 }	1,166.69	{ 11 tons Swill 415 tons } Markets	8,425.69
1903	8,178.93	"	{ Cash 3,299.87 Hay 1,584.72 Manure 100.95 }	1,191.86	{ 600 tons } Markets	9,370.79
1904	8,324.70	"	{ Cash 3,507.41 Hay 2,047.84 }	992.92	{ 303 tons } Markets	9,317.62
1905	8,318.50	"	{ Cash 3,656.12 Hay 2,079.38 }	1,101.20	{ 664 tons } Markets	9,419.70
{ 1906 Swill } Market Ref.	8,721.80 1,665.88	"	{ Cash 3,590.37 Hay 2,472.53 }	1,762.45	{ 1046 tons } Markets	12,150.13
{ 1907 Swill } Market Ref.	8,596.00 1,712.45	"	Cash 6,356.02	1,489.80	{ 1195 tons } Markets	11,798.25
{ 1908 Swill } Market Ref.	8,607.90 1,755.50	"	Cash 6,139.61	1,432.71	{ 1128 tons } Markets	11,796.11
{ 1909 Swill } Market Ref.	8,459.30 1,780.00	"	Cash 5,926.35	1,421.26	{ 1626 tons } Markets	11,660.56
{ 1910 Swill } Market Ref.	8,838.44 1,812.73	"	Cash 6,011.14	1,435.54	{ 1475 tons } Markets	12,086.71
{ 1911 Swill } Market Ref.	10,209.33 2,260.21	"	Cash 5,950.06	1,435.70	{ 1341 tons } Markets	13,905.24

1911 FINANCIAL STATEMENT — EXPENDITURES

PAY ROLLS — OFFICE

Jan	\$652.00
Feb	652.00
Mar	652.00
Apr	815.00
May	652.00
June	652.00
July	815.00
Aug	676.00
Sept	831.00
Oct	652.00
Nov	652.00
Dec	815.00
	<hr/>
	\$8,516.00

PAY ROLLS — YARD

Jan	\$2,986.01
Feb	3,111.63
Mar	3,016.88
April	3,768.41
May	3,141.63
June	3,088.38
July	3,918.64
Aug	3,120.89
Sept	3,922.01
Oct	3,132.01
Nov	3,104.77
Dec	4,013.33
	<hr/>
	\$40,324.59

ANALYSIS OF PAY ROLLS OF 1911 AS COMPARED WITH 1910

	1911	1910	Increase	Decrease
Agent	\$ 1,820.00	\$ 1,825.00		\$ 5.00
Contagion Inspector	1,404.00	1,227.50	\$ 126.50	
Plumbing Inspectors	2,496.00	2,191.00	305.00	
Health Inspector	1,092.00	1,095.50		3.50
Meat Inspector ..	936.00	939.00		3.00
Registrar	728.00	714.59	13.41	
Temporary Clerk	40.00	25.00	15.00	
Ashes	14,365.15	12,986.64	1,378.51	
Swill	10,209.33	8,838.44	1,370.89	
Dumps and Alleys	4,563.13	4,118.65	444.48	
Cremator	915.75	908.88	6.87	
Stable	2,397.63	2,142.75	254.88	
Fumigation	958.38	891.08	67.30	
Blacksmith	1,633.25	1,469.63	163.62	
Foreman	1,308.00	1,099.00	209.00	
Market Refuse ..	2,260.21	1,812.73	447.48	
Yardman	863.25	812.63	50.62	
Wheelwright	754.88		754.88	
Painter	95.63		95.63	
Jas. Groves for pay not collected Oct. 9, 1909		2.75		2.75
	\$48,840.59	\$43,150.77	\$5,704.07	\$14.25
Total Increase			\$5,689.82	

ANALYSIS OF BILLS 1911

OFFICE SUNDRIES

Advertising	\$ 49.50
Bacteriological Department	100.50
Express	9.45
Medical Services (Vaccinating and investigating causes of deaths	452.00
Printing Annual Report	103.60
Printed Supplies	150.72
Repairs	16.06
Rep'g Pest House	50.11
Stamps and Envelopes	110.49
Sundries	229.42
Telephone	14.70
Trip Book	20.25
Vaccine	32.50
	————— \$1,339.30

CARE OF CONTAGIOUS DISEASES, ACTS OF 1907

CHAPTER 386

City of Boston	\$233.14
City of Cambridge	25.71
City of Haverhill	40.00
City of Lynn	62.04
City of Salem	163.50
City of Worcester	55.72
Burials	27.00
Medical Services	308.50
Culture Taking	57.50
Medicine	90.65
Provisions	390.45
Fuel	12.00
Transportation .....	.88
Wages	18.75

Chelmsford St. Hospital	567.76
Lowell Hospital	156.25
St. John's Hospital	334.00
Central Elm Sanatorium Rutland	\$101.01
Rutland State Sanatorium	1,444.11
No. Reading State Sanatorium	1,245.33
Tewksbury State Infirmary	755.20
Children's Hospital, Boston	7.60
	<hr/> \$6,097.10
Total	<hr/> \$7,436.40

YARD SUNDRIES

	1911
Blacksmiths' Supplies	\$ 710.58
Corn	84.52
Cremator	519.95
Coal	146.02
Electric Light	25.21
Harness Rep'g and Supplies	289.38
Insurance	25.00
Fumigating Supplies	243.19
Meal	135.00
Printed Supplies	12.75
Oats	3,017.83
Straw	187.75
Sundries	188.45
Ice	22.70
Gas	54.44
Laundry	49.12
Water	147.65
Covers for ash carts	30.00
Canvas Covers	67.50
Use of Horses	200.00
Care of Horse	24.75
Mr. Silverblatt for damages to horse and wagon	25.00

New Horses	1,554.80
Veterinary Services	40.50
Repairs	21.98
Rep'g Wagons	36.85
Telephone .....	.10
New Wagon	155.00
Hardware	66.65
Hay	3,346.01
Lumber	\$285.64
<hr/>	
Total	\$11,714.32

MILK DEPARTMENT SUNDRIES

Express	\$ 4.00
Printed Supplies	44.75
Rep'g Concord Wagon	6.90
Sundries	79.72
Repairs	21.75
Telephone	38.23
Glassware	34.56
Milk Test Bottles	1.25
Stamps and Stamped Envelopes	28.50
Transportation .....	.50
Supplies and Utensils	14.75
Milk Tester	12.75
Kjeudahl Distilling Apparatus	45.00
<hr/>	
	\$332.66

INCOME TRANSFERRED TO GENERAL FUND 1911

HEALTH DEPARTMENT

Swill Sold	\$5,445.06
Swill Licenses	505.00
Waste Paper	25.00
Manicurists's Licenses	3.00
Use of trip tickets	1.62
Rebate on Express .....	.30
Manure sold to H. L. Shedd	70.00
J. Spellacy (Sale of old iron)	4.96
Commonwealth of Mass.	245.87
City of Brockton	31.05
City of Fitchburg	42.00
City of Haverhill	36.00
Town of Tewksbury	24.00
Town of Ware	34.00
	<hr/>
	\$6,467.86

MILK DEPARTMENT

Milk Licenses	\$294.50
Total to General Fund 1911	\$6,762.36 (This includes milk Dept)
Total to General Fund 1910	6,770.56 (" " " ")
Total to General Fund 1909	6,763.73
Total to General Fund 1908	6,418.50
Total to General Fund 1907	6,808.20
Total to General Fund 1906	4,566.66
Total to General Fund 1905	3,727.41
Total to General Fund 1904	4,137.31
Total to General Fund 1903	4,085.12
Total to General Fund 1902	6,103.87
Total to General Fund 1901	4,585.26
Total to General Fund 1900	3,647.03

SUMMARY 1911

	Appropriation from Revenue	Department Transfers	Receipts Cash	Additional Appropriation	Total Expenditures	Balances to 1912
HEALTH OFFICE						
Salaries of Board					\$ 1,500.00	
Salary of Dr. Smith					600.00	
Pay Rolls, Office ..					8,516.00	
					<hr/>	
Bills, Office.....	\$10,601.00			\$ 15.00	\$10,616.00	
	5,000.00			2,436.40	7,436.40	
					<hr/>	
YARD						
Pay Roll	38,619.51		\$1.35	1,703.73	40,324.59	
Bills	4,380.49	\$754.38		6,579.45	11,714.32	
					<hr/>	
MILK DEPARTMENT						
Salaries.....	2,204.00				2,202.00	\$ 2.00
Sundries	375.00				332.66	42.34
					<hr/>	
MEDICAL INSPECTION						
Private Schools.....	820.00				800.00	20.00
					<hr/>	
	\$62,000.00	\$754.38	\$1.35	\$10,734.58	\$73,425.97	\$64.34

COST OF HEALTH DEPARTMENT 1911

EXPENDITURES

Salaries of Board	\$ 1,500.00
Salary of Bacteriologist	600.00
Pay Rolls, office	8,516.00
Pay Rolls, yard	40,324.59
Bills, office	7,436.40
Bills, yard	11,714.32
Salaries, Milk Dep't	2,202.00
Bills, Milk Dep't	332.66
Medical Inspection Private Schools ...	800.00
	<hr/>
	\$73,425.97

APPROPRIATIONS

Office Salaries	\$10,601.00
Office Sundries	5,000.00
Yard Labor	38,619.51
Yard Sundries	4,380.49
Milk Dep't Salaries	2,204.00
Milk Dep't Sundries	375.00
Medical Inspection Private Schools ..	820.00
	<hr/>
	\$62,000.00
Transfers	\$ 754.38
Cash Receipts	1.35
Additional Appropriations	10,734.58
	<hr/>
	\$73,490.31
Balance	64.34
	<hr/>
Total	73,425.97

**FOLLOWING IS A SCHEDULE OF THE PROPERTY
IN CONTROL OF THE BOARD OF HEALTH**

1.	Brown Horse "Billy"	21 years	\$ 30.00
2.	Bay Horse "Peter"	22 years	15.00
3.	Black Horse "Torrent"	12 years	150.00
4.	Bay Horse "Lawrence"	11 years	200.00
5.	Bay Horse "Baldy"	23 years	50.00
6.	Mouse Skin Horse "Patsy"	7 years	250.00
7.	Brown Mare "Maggie"	24 years	5.00
8.	Bay Horse "Duke"	25 years	20.00
9.	Gray Mare "Grace"	19 years	50.00
10.	Black Horse "Nigger"	20 years	25.00
11.	Gray Horse "Jerry"	10 years	250.00
12.	Gray Mare "Mollie"	22 years	40.00
13.	Bay Horse "Ned"	18 years	50.00
14.	Bay Horse "Moxie"	17 years	50.00
15.	Black Horse "Tom"	15 years	50.00
16.	Sorrel Horse "Doctor"	20 years	20.00
17.	Bay Horse "Frank"	16 years	50.00
18.	Roan Horse "Tom"	10 years	200.00
19.	Bay Mare "Grace"	14 years	100.00
20.	Gray Mare "Daisy"	12 years	175.00
21.	Black Horse "Joe"	12 years	125.00
22.	Gray Horse "Grover"	6 years	300.00
23.	Black Horse "Ned"	10 years	275.00
24.	Black Horse "Tom"	11 years	200.00
25.	Black Mare "Bessie"	12 years	75.00
26.	Bay Mare "Peggy"	12 years	100.00
27.	Bay Horse "Jerry"	11 years	200.00
28.	Bay Mare "Jessie"	11 years	125.00
29.	Gray Horse "Harry"	11 years	275.00
30.	Gray Horse "Dick"	11 years	250.00
31.	Gray Horse "Sam"	11 years	100.00
32.	Gray Horse "Jim"	11 years	100.00
33.	Gray Mare "Hattie"	7 years	325.00
34.	Bay Mare "Henrietta"	12 years	\$150.00
35.	Bay Mare "Nettie"	7 years	125.00
36.	Bay Mare "Beauty"	7 years	250.00
37.	Bay Mare "Sally"	6 years	250.00
38.	Bay Horse "Jim"	16 years	50.00

\$5,055.00

1 horse was shot, 1 sold, and 5 new ones purchased during the year.

WAGONS AND SLEDS

1	Traverse Runner Sleigh	\$ 65.00
1	Ambulance	175.00
1	Hospital Wagon	100.00
12	Double Ash Carts	1,000.00
4	Single Ash Carts	150.00
12	Double Ash Sleds	900.00
4	Single Ash Sleds @ \$50.	200.00
11	Single Swill Sleds	600.00
15	Single Swill Wagons	800.00
2	Single Refuse Wagons @ \$125	250.00
2	Coupes	425.00
2	Paper Wagons @ \$100.00	200.00
2	Sleighs	80.00
2	Pungs @ \$35	70.00
1	Concord Wagon	150.00
2	Moyer Buggies	200.00
2	Goddard Buggies	325.00
1	Covered Sleigh	20.00
2	Paper Sleds @ \$75.	150.00
		<hr/>
		\$5,860.00

HARNESSES AND ROBES

3	Whips	\$ 1.50
1	Set Double Harness for Ambulance	25.00
2	Sets Single Harnesses for Ambulance	25.00
16	Single Harnesses	200.00
15	Double Harnesses	187.50
43	Halters	10.75
4	Horse Covers @ \$3.00	12.00
4	Woolen Robes	14.00
38	Baker Stable Blankets	50.00
5	Street Blankets	15.00
1	Rubber Lap Robe	2.00

37	Surcingles	18.00
25	Curry Combs and Brushes	25.00
12	Canvas Covers for Ash Carts	40.00
5	Mane Brushes	1.50
3	Under Harness Street Blankets ...	10.00
4	Large Canvases	8.00
2	Sponges	1.50
8	Collars	16.00
4	Collar Pads	5.00
3	Buffalo Robes	20.00
9	Harness Pads	1.00
8	Zinc Pads	1.00
1	Sheepskin	2.00
4	Sets of Reins	5.00
6	Shaft Lugs	2.00
2	Sets Hold-back Straps	1.00
10	Saddle Girths	4.00
33	Stall Straps	7.00
25	String Bells	12.50
6	Light Harnesses	50.00
37	Square Shovels	17.00
20	Swill Chisels	17.50
	Horse Medicine	3.00
3	Fly Nets	
3	Blankets for Contagious Coupe	3.00
4	Rakes	1.50
6	Dump Rakes	1.50
2	Boxes Harness Dressing	1.50
		<hr/>
		\$818.25

SUMMARY

Horses	\$5,055.00
Wagons and Sleds	5,860.00
Harnesses and Robes	818.25
Miscellaneous	200.00
Carpenter Shop	300.00
Blacksmith Shop	350.00
Smallpox Hospital	500.00
	<hr/>
	\$13,083.25

Year	Popula- tion	Expenditures	Revenue	Net Cost	City's Valuation	Taxation per Capita
1894	83,026	\$ a57,073.73	\$ 318.43	\$56,755.03	\$69,091,536	.63
1895	84,359	46,324.04	570.80	45,753.24	68,885,732	.54
1896	85,700	45,587.11	265.57	45,321.54	69,910,472	.53
1897	87,000	48,551.84	2,369.99	46,181.85	70,389,280	.53
1898	87,000	41,026.78	3,229.02	37,779.76	70,977,303	.43
1899	90,114	40,830.23	3,796.05	37,034.18	71,255,587	.41
1900	94,969	b46,266.11	3,647.03	42,619.00	71,529,515	.44
1901	94,969	46,673.41	4,585.26	42,088.15	71,674,588	.44
1902	95,574	c54,815.33	6,103.87	48,711.46	71,903,757	.48
1903	101,959	d46,168.01	4,085.12	42,682.89	72,004,028	.41
1904	104,402	e46,451.97	4,137.31	42,314.66	71,614,907	.40
1905	94,889	f51,707.39	3,727.41	47,979.98	71,645,718	.50
1906	96,380	54,096.00	4,566.66	49,529.34	74,325,775	.51
1907	96,380	57,763.79	6,808.20	50,955.59	76,079,750	.53
1908	96,380	g57,342.61	6,418.50	50,924.11	77,858,891	.53
1909	96,380	56,346.33	6,763.73	h49,582.60	79,176,837	.51
1910	106,294	h65,911.31	h6,770.56	h59,140.75	80,094,803	.56
1911	106,294	i73,425.97	i6,762.36	i66,663.61	82,166,743	.62

a. Small-pox and Swill Cremation, \$12,708.25

b. Small-pox, \$4,739.67

c. Small-pox, 6,626.20

d. Small-pox, 1,000.00

e. Small-pox, 1,010.02

f. Small-pox, 3,297.08

g. Small-pox, 291.64

h. This includes expenditures and revenue of Milk Dept.

i. " " " " " " " " " "

TABLE SHOWING RAINFALL IN INCHES BY MONTHS FOR THIRTY-THREE YEARS, 1879-1911.

YEAR	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec	Total
1879.....	2.475	3.762	5.013	4.030	2.279	5.709	4.379	6.176	2.176	1.434	3.364	4.465	45.262
1880.....	4.359	3.944	3.005	2.375	2.676	1.702	6.518	3.156	1.529	1.823	1.841	5.581	36.519
1881.....	5.538	3.151	7.210	1.855	4.274	4.900	2.496	1.731	2.730	1.962	4.282	4.253	44.182
1882.....	4.521	5.773	3.019	1.674	4.904	2.789	1.677	0.964	7.313	2.312	1.011	2.027	38.010
1883.....	2.923	3.405	1.885	1.895	1.640	2.036	3.583	3.977	1.487	5.292	1.720	2.623	32.418
1884.....	4.914	5.793	5.013	4.110	3.684	3.064	3.198	3.977	0.924	1.945	2.328	5.149	44.139
1885.....	4.856	4.085	1.022	3.606	3.589	4.293	6.026	6.098	1.581	4.841	5.163	2.811	48.001
1886.....	6.765	6.535	3.338	1.966	3.587	1.839	3.512	3.128	3.963	2.781	4.901	4.444	46.829
1887.....	5.720	5.182	4.738	3.046	1.644	2.608	5.425	10.931	2.228	3.116	3.270	4.547	53.445
1888.....	4.601	4.363	6.519	3.782	3.890	2.809	3.057	4.857	7.966	6.780	5.983	5.379	39.915
1889.....	5.037	1.710	1.938	3.830	3.889	2.392	6.102	3.979	3.266	4.268	6.929	3.366	46.756
1890.....	2.766	1.710	6.833	1.987	5.660	3.530	3.447	4.856	4.457	7.705	1.584	4.466	51.607
1891.....	7.041	3.840	5.953	3.563	2.289	3.659	2.968	1.966	1.806	2.926	1.913	3.204	41.131
1892.....	5.389	2.742	2.643	0.628	5.861	4.444	2.321	4.304	1.973	1.378	5.829	1.106	38.618
1893.....	2.392	7.703	2.439	2.946	4.900	2.414	2.696	3.944	2.293	3.825	1.933	5.460	42.945
1894.....	3.349	3.502	1.268	3.757	4.359	0.372	2.998	0.925	3.027	3.641	3.519	3.838	34.375
1895.....	3.306	1.747	2.656	4.569	1.782	2.631	2.659	2.017	2.230	6.674	8.165	1.172	41.332
1896.....	2.243	4.647	6.510	1.335	2.316	2.683	3.786	2.759	9.066	2.995	3.023	1.126	42.201
1897.....	4.551	2.958	4.146	2.248	4.945	6.106	4.619	5.630	3.033	0.592	6.487	5.320	50.439
1898.....	8.124	3.457	1.652	5.201	3.053	3.649	2.930	8.226	1.970	7.846	6.447	2.744	54.289
1899.....	3.690	5.017	7.950	1.500	2.100	2.713	4.116	2.111	3.663	1.987	2.714	1.683	39.244
1900.....	5.451	10.119	6.566	2.156	2.100	2.710	4.116	3.730	4.363	3.326	6.181	3.033	54.068
1901.....	1.720	1.056	5.756	10.567	7.678	1.489	4.776	3.267	3.282	5.288	0.856	6.204	51.110
1902.....	2.968	6.265	5.281	5.475	2.366	2.107	3.563	5.159	6.290	5.288	0.856	3.011	43.973
1903.....	3.386	3.957	5.940	3.691	0.818	9.180	2.621	3.676	1.745	4.461	1.527	3.011	43.973
1904.....	4.838	2.438	2.648	9.316	2.983	3.995	1.827	3.207	5.512	1.282	1.506	2.330	41.882
1905.....	6.958	1.705	3.708	2.171	2.293	5.179	0.591	4.498	6.389	1.327	2.251	3.862	39.932
1906.....	2.434	2.589	5.966	3.002	5.999	4.802	6.135	3.473	1.432	3.382	3.085	4.218	45.517
1907.....	2.770	2.390	2.149	3.638	2.578	3.033	4.367	1.356	8.525	4.492	5.772	4.735	46.605
1908.....	3.201	4.962	2.709	1.955	4.185	0.926	3.442	4.288	3.344	2.566	1.140	3.034	32.352
1909.....	4.166	5.787	0.477	5.530	2.773	2.132	2.517	2.460	4.213	1.203	2.646	4.078	37.982
1910.....	4.406	5.872	0.744	2.572	1.308	4.369	1.930	3.207	2.038	1.182	3.472	2.030	33.130
1911.....	2.658	2.883	3.505	1.987	0.810	2.468	3.351	5.755	2.586	3.422	3.567	3.324	36.316

INDEX

Organization	3
Report	5
Medical Inspection of Private Schools	13
Inspector of Milk	14
Inspector of Meats and Provisions	19
Reports of Plumbing Inspectors	20
Cases of Contagious Diseases Reported	22
Deaths from Contagious Diseases	22
Cases of Diphtheria and Croup Reported to the Board of Health for the Year 1911	23
Mortality of Diphtheria	24
Diphtheria	25
Tuberculosis	26
Typhoid Fever	26
Malaria	27
General Examinations	27
Scarlet Fever	28
Measles	29
Places of Death	30
Deaths from Cholera Infantum	31
Vital Statistics	31
Places of Interment	32
Death Rate	33
Mortality Report for 1911	34
Collection of Ashes	52
Cost of Collection	52
Amount of Refuse Burned at Cremator in 1911	53
Number of Loads of Swill Collected	53
Swill Account	54
1911 Financial Statement, Expenditures	58
Analysis of Pay Rolls of 1911 as Compared with 1910	59
Analysis of Bills, 1911	60
Income Transferred to General Fund	63
Summary, 1911	64
Cost of Health Department, 1911	65
Schedule of the Property in Control of the Board of Health	66
Table Showing Rainfall in Inches by Months for Thirty-three Years, 1879-1911	71

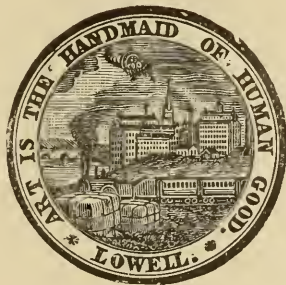
ANNUAL REPORT

OF

Chief Engineer

OF THE

FIRE DEPARTMENT OF THE
CITY OF LOWELL



For the Year Nineteen Hundred and Eleven

REPORT

CHIEF'S OFFICE,
PALMER ST. ENGINE HOUSE,
LOWELL, January 1, 1912.

MR. ANDREW E. BARRETT,
Commissioner of Water Works and Fire Protection of
the City of Lowell.

DEAR SIR:—In accordance with the requirements governing the Fire Department, it becomes my duty, as Chief Engineer, to present to you the annual report of the Fire Department of the City of Lowell for the year ending December 31, 1911.

The report will be found to contain statements in detail embracing the amount of expenditures, a record of all fires and alarms which have occurred during the year, and the cause thereof, with the names of the owners and the occupants, the loss and insurance, as nearly as could be ascertained and such information as is thought proper for your consideration.

The following statement will show the receipts and expenditures.

RECEIPTS

Appropriation	171,976 25
Extra appropriation	4,624 63
	<hr/>
	\$176,600 88

EXPENDITURES

Pay roll	\$146,810 27	
Water works	539 32	
Hose and repairs of same	1,698 19	
Telephone	266 19	
Express and freight	27 56	
Horses and use of same	2,260 10	
Shoeing	2,046 86	
Veterinary and medicines	202 25	
Hay, straw and grain	9,177 27	
Harness and repairs	451 20	
Furniture and bedding	630 39	
Coal and wood	3,203 83	
Lighting	2,535 10	
Printing	388 05	
Repairs on apparatus	3,041 81	
Chemicals	384 19	
Laundry	175 13	
Fire alarm boxes and repairs	466 48	
Oils, sponges, etc	2,296 69	
	<hr/>	
Total expenditures for the year		\$176,600 88

In addition to the above an appropriation of \$3,000.00 for underground wires. \$2,993.44 has been expended for cable, labor, etc.

SALARIES OF MEMBERS OF FIRE DEPARTMENT

Chief Engineer.....	\$2,200 00 per annum
First Assistant Engineer.....	1,500 00 per annum
Other Assistant Engineers.....	450 00 per annum
Call Men	250 00 per annum
Permanent men.....	3 00 per day
Captains of Companies (Permanent).	3 35 per day
Engineers of Steamers “	3 25 per day
Lieutenants of Companies “	3 25 per day

This deparment is divided into two classes, Permanent and Call. The permanent force consists of

- | | |
|----------------------------|-------------------------|
| 1 Chief Engineer | 27 Drivers |
| 1 First Assistant Engineer | 23 Laddermen |
| 1 First Alarm Operator | 6 Engineers of Steamers |
| 49 Hosemen | 8 Patrolmen |
| 1 Lineman | |

A total of 117, of which 17 are Captains and 18 Lieutenants.

The call force consists of

- | | |
|-----------------------|------------|
| 3 Assistant Engineers | 50 Hosemen |
| 16 Laddermen | |

A total of 69

This makes a total of 186, divided into companies as follows:

- 6 Steam Fire Engines, with Hose Wagons.
- 6 Horse Hose Companies.
- 4 Hook and Ladder Companies, 2 with Chemical Engines attached.
- 1 Protective Company.

The changes in the force during the year have been as follows:

Appointed on the Call Force.....	3
Appointed on the Permanent Force.....	2
Promoted.....	1
Died.....	3
Pensioned.....	1

The apparatus is kept in the best possible condition, and consists at present of six Engines, twelve two-horse Hose Wagons, one Babcock and one LaFrance Aerial Trucks and two trucks of other patterns, two Chemical Engines, one Hale Water Tower, one Auto Patrol Wagon, fully equipped, seven Hose Pungs, eight Fuel Wagons, two Wagons and one Sleigh for use on Fire Alarm, one Wagon and one Auto for Chief's use, one Wagon for Assistant Chief's use, and thirty Fire Extinguishers. In reserve there is one two-horse Hose Reel.

The Chief's car was put in service in March. Since that time it has run twenty-eight hundred sixty miles, doing the work of three horses.

Engine 2 has been in service since 1882, and should be sent off and be rebuilt, which will make her as good as new.

FIRE ALARM

This branch of the service has been maintained in most excellent condition by the operator, Mr. H. C. Fernald.

There have been two hundred and fifty-four alarms given from signal boxes, and the "No School" signal has been given eleven times during the past year.

Connected with the circuits there is one ten-circuit non-interfering repeater, one ten-circuit cut-out and testing switchboard, one slate protector, twelve galvanometers, twelve bell-strickers, seventeen large gongs for engine houses, eight small gongs, eighteen indicators, one tape register, sixteen electro-magnets and connections for opening stall doors, one hundred and thirty-two public and thirteen private signal boxes, one hundred and twelve miles of wire, the whole supplied with a storage battery of five hundred and thirty cups.

There is also one large gong and indicator combined in the Police Station, one large gong in Pumping Station, Merrimack Square, Tower's Corner, Bridge and First Streets, Middlesex and Thorndike Streets, and Moody and Aiken Streets. One new box has been added. Two boxes have been made over the past year.

TELEPHONE

There are connected with this system twenty-one stations, consisting of transmitter, telephone bell and battery; there are also twenty-eight tap bells for the rooms of the Engine Houses, and about forty-four miles of wire owned by the city, under the care of the Fire Alarm operator, except the receivers and transmitters, which are leased from the Telephone Company. The ringing line is supplied by a storage battery of one hundred and fifty cups. There are sixty cups of carbon battery.

GAS LIGHTING

Ninety cups of carbon battery are used for the gas lights.

HORSES AND HARNESES

There are sixty-one horses in the service of this department. Nine new ones have been purchased the past year to take the place of nine that had passed their usefulness for this department. One pair was transferred to the Charity department and one horse was shot. There are twelve sets of double, ten sets of three-horse hitch, and four swinging harnesses of the Berry and Hale patents.

PROTECTIVE DEPARTMENT.

This department is maintained by the City and consists of nine Permanent men. They have responded to four hundred and forty alarms; in service five hundred and two hours; spread two hundred and seventy-six covers; used four hundred and ninety-seven extinguishers and seventy-seven tanks; raised four hundred forty feet of ladders; ten hundred forty-three hours inspection duty; traveled thirteen hundred and forty-nine and one-tenth miles.

Chemical B, attached to Truck 3, used forty-eight (eighty-five gallons) tanks. Chemical C, attached to Truck 2, used one hundred and nine (eighty-five gallons) tanks.

HOSE

The department received two thousand feet of 2½ inch hose the past year and will need two thousand feet of new hose the present.

NEW HYDRANTS SET 1911

Aiken Avenue.....	6 in. Ludlow Hydrant
B Street.....	6" Chapman "

Cumberland Road	6 in. Ludlow	"
Essex Street	6" Ludlow	"
Grafton Street	6" Ludlow	"
Grand Street	6" Ludlow	"
Gorham Street	6" Ludlow	"
Hale Street	6" Ludlow	"
Hawthorne Street	6" Ludlow	"
Henry Avenue	6" Ludlow	"
Highland Avenue	6" Ludlow	"
Martin Street	6" Holyoke	"
Monadnock Street	6" Ludlow	"
Pawtucket Boulevard	6" Ludlow	"
Payne Street	6" Ludlow	"
Pleasant Street	6" Ludlow	"
Preston Street	6" Boston Post	
Richards Street	6" Eddy Hydrant	
Rutland Street	6" Ludlow	"
Stafford Street	6" Ludlow	"
Varnum Avenue, Six (6)	6" Ludlow	"
Walker Street	6" Ludlow	"
West View Street, Two (2)	6" Ludlow	"
White Street	6" Ludlow	"

HYDRANTS DISCONTINUED

Canal Street	Flush Hydrant
Lilley Avenue	Eddy Hydrant
Riverside Street	Boston Machine Hydrant
School Street	Ludlow Hydrant
Wellington Street	Ludlow Hydrant

FIRE AND LOSSES

The whole number of alarms during the year ending December 31, 1911, was eleven hundred and one. Two hundred and fifty-four (254) were given from signal boxes;

five hundred and sixteen (516) telephones; one hundred and forty-one (141) stills; twenty-eight (28) automatics; twenty (20) exposures; and one hundred and forty-two (142) reported fires. The "No School" signal was given eleven (11) times. There were five hundred and ninety (590) fires extinguished by chemicals alone, and one hundred and sixty (160) where water was used. The remaining number were extinguished by other means or had been put out before the arrival of the department. Eighty-five fires were in brick or stone buildings; five hundred and fourteen (514) in frame buildings, and five hundred and two (502) other than building fires.

The whole amount of loss except the reported ones was one hundred and two thousand three hundred and fifty-eight dollars and ninety-seven cents (\$102,358.97). Insurance \$3,165,017.65, insurance paid \$83,063.49. Loss above insurance \$19,295.48. Valuation \$3,759,673.45. The reported loss was \$2,970.85, insurance \$362,113.50, valuation \$479,625.00.

There have been twenty-five (25) alarms out of the City to which some part of the department has responded, for which no insurances are kept; Dracut 6, Tyngsboro 8, Tewksbury 2, Chelmsford 7, Dunstable 1, Billerica 1.

This City was again fortunate in having so few large fires the past year. There have been only sixteen (16) fires where loss was \$1,000.00 and over. February 3rd, J. Boisvert's block on West Sixth Street, several occupants, loss \$1,804.00. February 9th, Massachusetts Corporation, storehouse for cotton, loss \$4,617.46. April 30th, block owned by A. Dionne, Beaulieu Street, several occupants, loss \$1,212.54. May 8th, eight dwellings on Summer, Winter and Davis Streets, several owners, loss \$1,697.53. May

11th, Paul Vigeant's stable on Riverside Street, loss \$1,155.38. May 22nd, J. Higgins' block on Market Street, several occupants, loss \$1,932.00. June 21st, W. F. Copson Webbing Mfg. on B. Street, loss \$6,708.19. June 21st, P. J. Riley's rag storehouse on Tanner Street, loss \$37,625.33. August 6th, Mrs. A. B. Courtney's dwelling on Middlesex Street, loss \$8,000.00. August 14th, G. R. Dana's automobile on the Boulevard, loss \$2,000.00. September 13th, F. P. Cheney's Box and Shuttle Mill on Border Street, loss \$4,287.90. September 14th, E. B. Pierce, storehouse on Tanner Street, occupied by Tom McNamara and son, loss \$2,350.00. September 16th, Perry Thompson's residence on Andover Street, loss, \$1,928.81. November 19th, J. Freeman's block on Middlesex Street, occupied by Boyle Bros. and others, loss \$1,143.00. November 21st, Tremont and Suffolk Mfg. Company, Cabot Street, loss \$2,240.00. December 11th, L. Tolve's block on Fletcher Street, loss \$2,480.00. The total loss on these sixteen (16) fires was \$81,182.14.

There have been eleven (11) fires where the loss was between \$500.00 and \$1,000.00. January 9th, Pascal Harnois' block on Moody Street, several occupants, loss \$566.97. January 14th, E. Greenberg's dwelling on Hale Street, occupied by H. Ziskind, loss \$502.00. April 26th, Hamilton Corporation, Jackson Street, loss \$540.74. May 17th, M. Gondreau's dwelling on Woburn Street, loss \$757.28. June 3rd, J. M. G. Parker Estate, block on Bridge Street, several occupants, loss \$741.58. June 17th, S. Silverblat, dwelling on Grand Street, occupied by B. Levine, loss \$579.24. July 18th, Lamson Consolidated Store Service on Walker Street, loss \$703.66. September 1st, V. Pigeon's automobile on Westford Street, loss \$800.00. September

12th, M. T. Stevens Estate, Central Street, occupied by Talbot Clothing Co., loss \$620.00. November 25th, L. E. Mercier's dwelling on East Meadow Road, loss \$565.00. B. H. Wiggin, dwelling on Middlesex Street, Folsom and Cheney occupants, loss \$894.00. The total loss on these eleven (11) fires was \$7,270.47.

Total loss on these twenty-seven (27) fires was \$88,452.61 leaving \$13,906.36 to be divided between the other nine hundred and thirty-two (932) alarms.

The following is the total number of buildings of all kinds in the City:

Total number of wood buildings.....	17,969
Total number of brick buildings.....	986
Total number of stone buildings.....	80
Total number of cement buildings	44
Total number of wood and glass buildings.....	44
Total number of wood buildings covered with tin.	9
Total number of steel buildings.....	6
Total number of iron buildings.....	6
Total number of concrete buildings.....	3
Total number of buildings of all descriptions	<u>19,147</u>

An increase during the past year of..... 304

Some of these blocks have from four to twenty tenements

The following table shows the number of alarms of fire each month:

January	45	August.....	47
February	46	September	35
March	65	October	33
April.....	188	November	50
May	177	December	51
June	71	Reported.....	142
July.....	151		—
Total			1101

The following table shows the causes of the different alarms as near as could be ascertained:

Accident	1	Combustion of coal.....	1
Alcohol caught fire....	1	Coffee Roaster	1
Alarms for same fire...	39	Curtain	1
Ash barrel.....	5	Conductor plugged up....	1
Ash chute	2	Dump.....	72
Automobiles.....	9	Defective stove pipe.....	1
Awning.	2	Dust tube caught fire....	1
Back draft	1	Drying plaster	3
Bed	1	Defective motor.....	6
Boiler smoking.....	6	Defective chimney.....	14
Boys set tree.....	1	Electric motor.....	1
Bonfires.....	2	Exposure	20
Bridge	1	Electric car	2
Brush.....	104	Electric wires set bridge.	1
Building fire with oil...	1	Fat on stove.....	4
Careless smoking	17	False alarms.....	12
Careless use of matches	31	Fire in register	1
Chimney	89	Friction....	1
Christmas tree set by		False alarms by telephone	2
candles	1	Fire crackers set roof....	3
Children and matches..	19	Fire cracker set clothes	
Cigaret set bulkhead..	1	of woman	1
Cigaret stub.....	23	Furnace smoking	2
Clothes caught from		Gas Stoves.....	4
stove.....	1	Grass	150
Clothes in closet	1	Gas explosion	1
Combustions	15	Rags in closets.....	2
Gas jet set curtain....	2	Rats' nest.....	7
Gas light set awning..	3	Rats and matches	2

Gas range.....	1	Rekindled.....	9
Gas heater.....	3	Repairing wires.....	1
Gas stove set curtain...	1	Rubbish	25
Gas jet set pitch.....	1	Reported alarms	142
Gas jet set towel.....	1	Rubbish set by boys.....	2
Gas leak	5	Sawdust in boiler room..	1
Gasoline	2	Shavings	1
Gas stove set oil stove..	1	Spark set boxes.....	1
Gasoline stove.....	1	Spark set bridge.....	1
Grease on stove.....	1	Spark set car house.....	1
Hot ashes.....	1	Spark set floor.....	1
Hot stove	3	Spark set lumber.....	1
Hot stove set curtain..	2	Spark set roof	19
Hot stove pipe.....	1	Spark set railroad ties...	1
Hot coals set floor	1	Spark set platform.....	1
Incendiary	1	Spark set shed.....	1
Ice boom.....	1	Spark set sawdust	1
Kettle of fat	1	Spark in partition	1
Killing cockroaches....	1	Spark from motor.....	1
Lamp exploded.....	1	Spontaneous combustion.	2
Lumber shed set by boys	1	Smoke	3
Match set awning.....	1	Smoking in bed	2
Match set curtain.....	2	Steam pipe.....	2
Meat on stove.....	5	Steam escaping.....	1
Mistake in calling.....	2	Stove pipe	2
No school	11	Stove smoking	7
Naphtha caught fire...	2	Stove knocked over by	
Overheated boiler	4	horse	1
Overheated chimney...	7	Stove exploded	1
Overheated fire place..	3	Tar kettle	3
Overheated oven	2	Taxi caught from gasoline	1
Overheated stove.....	3	Testing new hydrant....	1

Overheated stove pipe.	3	Thawing water pipe....	5
Overheated thermostat	13	Thermostat system out of	
Oakum caught fire....	1	order	10
Oil caught fire	1	Tree.....	3
Oil lamp	10	Unknown	13
Oil lantern.....	1	Water leak.....	6
Oil stove	5	Waste barrel.....	1
Out of the City	25	Wetting buildings.....	2
Peat bog	3	Wetting streets.....	8
Railroad ties.....	1	Wires arced.....	1
Rags burning	1	Wire set tree	1

SERVICE OF THE DEPARTMENT FOR 1911

FIRE DEPARTMENT

	Number of alarms attended	Number of hours worked	Feet of hose laid	Hours of hydrants in use	Number of extinguishers used	Number of chemical tanks used	Feet of ladders raised	Hours engines worked	Number of covers used
Engine	120	131½	6,400	32¾	97			7	
"	174	209½	14,550	38¼	130			9¾	
"	198	211½	4,200	14¼	24			2	
"	165	188½	11,800	30	68			1	
"	166	254	19,800	30	246		247	1¼	
"	155	134	14,400	18½	44			3¾	
Hose	176	170½	10,500	36½	110				
"	187	177	9,300	8¼	122				
"	121	194	10,500	79¾	85				
"	133	191½	10,750	44¼	39	96			
"	71	85½	4,350	1¼	68				
"	148	204½	9,800	21¾	77				
Truck	68	80½			3		452		
"	233	325½			6	109	1,053		
"	248	280½			2	48	1,684		
"	92	106½			497	77	1,586		276
Protective	440	502					440		
	2,895	3,447	126,350	355½	1,618	234	5,558	24¾	276

1,322 hours inspection duty.

The following are the number of alarms answered by members of the department on their days off.

Lieut. Abare, 4; Lieut. Adams, 2; Lieut. Alcott, 1; J. W. Ambrose, 3; Capt. Baxter, 2; Capt. Bartlett, 12; Capt. Boynton, 4; Capt. Brown, 1; Capt. Burns, 3; E. S. Barnes, 9; J. N. Bernier, 6; W. M. Barrett, 7; F. Boynton, 1; R. E. Burns, 1; R. W. Broadbent, 6; Capt. Crowley, 6; Lieut. Collins, 4; C. H. Cogswell, 9; C. Collins, 2; F. S. Collins, 5; M. I. Collins, 3; D. F. Conroy, 2; R. Carland, 2; J. F. Convery, 1; H. Carpentier, 1; D. Common, 1; T. F. Conway, 1; Lieut. Chapman, 1; E. J. P. Cunningham, 4; Capt. Dolan, 3; Lieut. Dunn, 4; Lieut. Dearth, 1; Lieut. Dwyer, 3; J. D'Amour, 1; W. T. Dolan, 2; J. J. Donahoe, 1; W. F. Eagan, 8; Capt. Foley, 5; Capt. Fuller, 3; Lieut. Flint, 11; J. A. Fletcher, 3; H. L. Foster, 9; W. T. Foss, 6; Q. A. Foster, 2; J. E. Fontaine, 6; H. S. Gardner, 1; Capt. Halstead, 12; Capt. Hemenway, 8; Capt. Hilliard, 7; Capt. Hoyt, 1; Capt. Hurley, 8; Lieut. Harris, 2; Lieut. Halstead, 4; H. Hilliard, 1; W. J. Heelon, 1; J. W. Jantzen, 10; F. A. Kappler, 1; A. E. Kidder, 9; G. W. Lovett, 1; J. J. Lowney, 3; N. Landry, 1; E. Landry, 14; E. Lepene, 1; Capt. Merrill, 1; Lieut. McCafferty, 12; P. F. Mahoney, 1; H. Mangan, 2; P. F. Mooney, 1; F. D. Mansur, 1; W. P. Maker, 2; T. F. Maguire, 4; J. J. McManmon, 2; A. S. Maynard, 6; J. J. McCarthy, 1; J. J. McGuinness, 2; H. R. Morrison, 4; R. Otley, 4; W. H. Oke, 5; J. O'Hare, 6; P. H. O'Loughlin, 1; J. C. O'Neil, 1; A. F. Prescott, 2; S. R. Pendexter, 12; J. H. Rogers, 3; C. A. Rock, 3; M. C. Rowell, 5; Lieut. Rogers, 4; B. C. Reed, 1; L. P. Reed, 1; D. W. Russell, 2; J. J. Rinehardt, 11; Capt. Sullivan, 1; C. F. Stackpole, 4; B. M. Simpson, 1; T. Saunders, 1; G. E. Schofield, 4; R. W. V. Sloan, 4; F. Townsend, 1; W. F. Tighe, 12.

There were six deaths by burning the past year. March 18th, James T. Murray, 70 years old, Tyler Street. Oil stove exploded. July 3rd, John Quirk burned in brush fire on Boston Road. July 4th, Hazen Merritt, 7 years old, Congress Street. Fire Crackers set clothes. July 5th, Mary Viera, Hall Street. Fire crackers set clothes. Aug. 14th, Albert Hayne. Automobile turned turtle on the Boulevard. September 4th, Stanley Berkoskey 22 months old, Howe Street. Playing with matches.

There have been three deaths in the department the past year. April 12th, Capt. E. Cunningham, a pensioner, died. He joined the department August, 1866. George T. Halstead, a permanent man, died very suddenly June 17th. He joined the department Nov., 1883. Charles Stackpole, an assistant engineer, after a very few days' illness, died November 10th. He joined the department January, 1883.

The following is a list of the men injured the past year. Lieut. James McCafferty, F. D. Mansur, E. S. Barnes, Hose 10. E. D. Kerwin, Truck 2, W. M. Barrett, Hose 8, E. F. Farrell, Engine 5, Lieut. George H. Chapman, Hose 9, P. McLaughlin, Truck 4, J. E. Fontaine and J. Bernier, Hose 12.

LOWELL FIREMEN'S FUND ASSOCIATION.

This benevolent association was organized December 17, 1885, for the purpose of furnishing relief to such of its members as should receive injuries while in the discharge of their duties. The income is derived from an annual assessment upon each member, and by donations from citizens and others; and in behalf of the members of the association, I would return thanks to all those who have aided us in the past.

The following donations have been received during the past year:

A. G. Pollard.....	\$ 50 00
P. J. Riley.....	50 00
Adams Hardware Company.....	10 00
John Kerr, Chief, St. John, N. B.....	5 00
	<hr/>
	\$115 00

The following shows the amount standing to the credit of the association December 31, 1911.

Balance on hand December 31, 1910...	\$24,310 73
Cash received to December 31, 1911...	1,365 13
	<hr/>
Total... ..	25,675 86
Cash paid out.....	1,359 54
	<hr/>
On hand December 31, 1911.....	\$24,316 32

In conclusion I wish to thank my Board of Engineers, officers and members of the Department for their promptness and efficiency in the performance of their duties. To the Mayor and City Council, Clerk, Auditor, Treasurer Superintendents of the different departments, and all others, who have in any way assisted me in the discharge of my duties, I extend my sincere thanks.

Respectfully submitted,

EDWARD S. HOSMER,

Chief of Fire Department.

FIRE DEPARTMENT**JANUARY 1, 1912.**

COMMISSIONER**ANDREW E. BARRETT**Office, City Hall

CHIEF ENGINEER

EDWARD S. HOSMER Office, Palmer St. Engine House
Residence, 202 Westford Street

FIRST ASSISTANT ENGINEER**JAMES F. NORTON** - - - Residence, 22 Ames St.
Died February 25th, 1912

ASSISTANT ENGINEERS**EDWARD MELOY** - - - - - 30 Fort Hill Ave.
CHARLES E. ALWAY - - - 16 West Bowers St.
E. F. SAUNDERS - - - 24 Mount Washington St.

CHIEF'S CHAUFFEUR**H. B. SANDERS** - - - Palmer St. Engine House

FIRST ASSISTANT ENGINEER'S DRIVER**T H. WELCH** - - - - Hose 7, Hose House

TELEGRAPH OPERATOR

HENRY C. FERNALD - - Palmer St. Engine House
 TOM McCORMICK, Lineman

FIRE ALARM TELEGRAPH

LOCATION	-	-	-	-	Engine House, Palmer St.
HENRY C. FERNALD	-	-	-	-	Operator
TOM McCORMICK	-	-	-	-	Lineman

Ten-Circuit Automatic Repeater with Storage Battery of 530
 Cups.

Miles of Wire.....	112
Signal Boxes.....	145
Engineers' Gongs.....	8
Engine House Gongs.....	17
Indicators.....	18
Tape Register.....	1
Bell Strikers.....	12
Gong and Indicator combined at Police Station	
Gong in Pumping Station	
Gong on Merrimack Square	
Gong on Tower's Corner	
Gong at Northern Depot	
Gong corner Bridge and First Streets	
Gong corner Moody and Aiken Streets	

The strikers are located as follows: Palmer Street Engine House, Varnum School House, High Street Church, Court House, No. 1 Engine House, Franklin School House, Pawtucketville Engine House, No. 6 Engine House, Highland School House, Lawrence Street Engine House, Cornell Street School House, West Sixth Street Engine House.

TELEPHONE CIRCUIT

Complete Stations.....	21
Tap Bells (Extra)	28
Miles of Wire	44
Storage Battery of 150 Cups	
Carbon Battery of 60 Cups.	
Carbon Battery of 90 Cups used for Gas Lighting.	

The value of all property, as near as can be ascertained, in care of the Chief of this Department is \$154,000.

Ninth Annual Report

OF THE BOARD
OF

Park Commissioners

OF THE

City of Lowell

FOR THE

YEAR ENDING DECEMBER 31, 1911.



THE LAWLER PRINTING CO., LOWELL, MASS.

1912

Department of Public Parks

COMMISSIONERS' REPORT

*To His Honor the Mayor, and the City Council
of the City of Lowell, Massachusetts.*

As required by Chapter 28, Section 13 of the Revised Laws of Massachusetts, entitled "Public Parks, Playgrounds and the Public Domain," the Board of Park Commissioners of the City of Lowell have the honor to submit their ninth annual report.

Board of Park Commissioners

1911 - - 1912

*JOHN J. PICKMAN, 1908-1913.

*JOHN E. DRURY, 1907-1912.

HENRY F. CARR, 1911-1916.

*THALLES P. HALL, 1910-1915

*HARVEY B. GREENE, 1909-1914.

* Re-appointed

OFFICERS

Chairman,

JOHN J. PICKMAN.

Secretary,

JOHN E. DRURY.

General Superintendent,

CHARLES A. WHITTET.

Consulting Engineer,

STEPHEN KEARNEY, City Engineer.

Park Areas and their Valuation

The Rogers Fort Hill Park,	34.40 Acres	\$150,000
The South Common,	22.48 "	200,000
The North Common,	11.39 "	100,000
Tyler Park,	1.81 "	8,000
Belvidere Park,	1.77 "	20,000
Mt. Vernon Park,	0.50 "	4,350
Varnum Park,	0.136 "	6,000
Monument Square,	0 092 "	15,000
Penniman Square,	0.051 "	450
Lincoln Square,	0.016 "	200
Hovey Square	0.010 "	50
Mansur Square,	0 040 "	150
Water Works Square,	0.047 "	500
Coburn Square,	0.252 "	1,000
Hutchinson Square,	0.037 "	150
Lenox Square,	0.181 "	1,500
Franklin Square,	0.058 "	1,500
Princeton Square.	0.028 "	150
Middlesex Square,	0 034 "	200
Lincoln Playground,	1.525 "	6,000
Fayette Street Playground,	0.170 "	2,000
Varnum Avenue, River-bank,	0.456 "	1,500
Colonial Avenue, River-bank,	3.50 "	2,000
Glacial Oval,		100
City Hall and Memorial Grounds	0.50 "	65,700
Lincoln School Grounds,	1.02 "	4,445
Highland School Grounds,	1.24 "	5,392
Greenhalge School Grounds,	2.30 "	10,000
Moody School Grounds,	1.18 "	7,684
Riverside School Grounds,	1.05 "	2,281
Shedd Playground,	56.00 "	50,000
Parker-Spalding Square,	0.043 "	60
Lucy Larcom Park,	0.50 "	21,970
Hillside Park,	0.061 "	80
Harris Oval,	0.12 "	366
 Total	 142.997 Acres	 \$668,718

Report of the Park Commission For the Year 1911

The most notable event in the record of the administration of the parks of the city for the current year was the adaption and use of a part of Shedd Park for skating. There was not much time available to put the land in condition for use as a skating park, but it served to afford the opportunity to make the surface sufficient to accommodate a very large number of children and grown persons as well, who came from all parts of the city to skate upon it for many weeks in the winter season. There were but few snow storms in the early winter months and the weather conditions generally were favorable for skating, and, as a consequence, there were more persons who visited Shedd Park during the skating season than went to many of the parks in the city during the corresponding length of time in the summer previously to the opening of Shedd Park for skating. The experience of last year was fruitful in supplying suggestions to improve the conditions

for skating at Shedd Park the coming season. The space for skating has been cleared and extended and the facilities for the supply of water to flow upon the land have been increased and approved. It is money profitably expended that gives to the youth of the city a safe place to enjoy this healthful and exhilarating sport that is peculiarly the winter sport of New England. The public is indebted to his Honor the Mayor for his especial interest in the work of putting the land in condition for skating purposes, and to Robert J. Thomas, the Superintendent of the Water Board, and to the members of the Water Board of the City for permitting the water of the City to flow upon the land. The success of the experiment of the skating park at Shedd Park affords warrant for the belief that in other parts of the city land will be flooded and used for skating, and coasts made where the lands on the commons and parks are suitable for the purpose, that the children may have afforded to them spaces for out-of-door exercise during the season when too many remain indoors to their detriment. The liberal appropriations made by the City Council for Shedd Park have made it possible to make a good start in the work at Shedd Park, that will make it when it is completed, the best all-round Park in the city, a park that will provide under the most favorable conditions, rest and recreation for the public.

The primary and fundamental object of parks is to get the public to visit them and to make use of them. To accomplish these purposes they must be kept attractive and orderly, and must have conveniences adapted to places of public resort.

FORT HILL PARK

Fort Hill Park is the only park of any size in the city that may be termed a public garden or a display park. It is the park to which strangers are brought as one of the places of interest and attractiveness. To make it worthy of the distinction of the name of the Public Garden of Lowell it must be made attractive by the use of all reasonable means. The flower beds and shrubs must be well kept. The paths and walks should be maintained at a high standard with respect to care and treatment. It would not be a wise policy to allow this beautiful park to lose any of the features that have made it one of the most attractive public parks in New England. The Commission has repeatedly called the attention of the city council to tracts of land in different parts of the city that are desirable to be obtained by the city for park purposes. The present time is the time to obtain these tracts of land with the view that all parts of the city may have the advantages that are had in the localities where parks are located. Mr. Shedd, by his generous gift to the city has given an example that other public spirited

citizens may follow to the great advantage of the public.

The time will come when many of the parks will be used for skating, coasting or snow shoeing in the winter months to as great an extent almost as they are used in summer. It is to be hoped that the time will come when the citizens will use the parks and commons for rest and recreation to an extent not hitherto known.

In this workshop city of ours the time spent in the open air, in the country, or in the parks, is an advantage that counts for health and pleasure.

LUCY LARCOM PARK.

This attractive lot of land bordering on the canal in the centre of the city has been kept well lighted at night and gives promise of being very much resorted to. It is evidently appreciated by the pupils of the Lowell High School, from the number of them who make use of it for a promenade.

CITY HALL GROUNDS.

For several years prior to this year it was found to be difficult to keep these most public grounds in proper condition. The children and the dogs ran over the flower beds, and not unfrequently the grounds were in an unsightly condition. This year it was decided to make a change in the treatment of the grounds, that from their nearness to the public

buildings should be made and kept attractive. In pursuance of the policy of the Commission that has been followed with respect to nearly all the plans for work of any distinction, the services of Olmsted Brothers were obtained to look over the ground and to prepare a plan thereof, and with it to submit a planting plan. As the result a radical change was made in the treatment of the City Hall Grounds that is believed to be an improvement.

PLAYGROUNDS.

The playground movement in Lowell started with the primary purpose of giving the children places to meet and to play where they could engage in sports and pastimes under conditions where they would be glad to stay during the days of summer when the schools were closed, with the view also that the mothers and care-takers of the children might know that their children were where it was safe for them to be. Afterwards, supervisors were employed to take care of the children and to direct their sports and to see that they had a fair chance in the use of the apparatus, and to keep them interested. The purposes were simple, but they were and are vital to the success of the playgrounds. To keep a large number of children interested in sports and pastimes that are congenial to them, not for a day or two, but for many days in each week during the entire season, and thereby to keep them from the street and from idle or

vicious company, were the considerations that prompted the playground movement. Within a few years by the process of evolution there have been added to these very simple objects of the playgrounds other features, such as industrial training, instruction in first aid to the injured, and folk dancing. The work on the playground now serves to add to the child's capacity to do something in the way of the training of his faculties by the industrial work that he is called upon to perform. The useful purpose is also served to keep the body and mind of the child alert when he has ceased to care for play. He is given cloths, paper, and other materials, and is taught to put them together, to sew, to braid, and to work up the raw material into manufactured product. The success thus far of industrial work on the playgrounds by the boys and girls has been noteworthy, and it is but at the beginning. In this work the playground serves the purpose of training the head and the eye that brings into active use the faculties that are in every child, that makes a child more useful. In addition to the supervision of the play and the training in industrial work something has been done in the way of a medical inspection of the children.

Another important consideration with respect to the playground work is that it keeps the children who are on the playgrounds in the vacation season in a better state of body and of mind, better adapted for the discipline of the school room than the child would

be were it permitted to run about the streets or to kill time at home during the vacation season. Many of the supervisors last year and this year were teachers in the public schools in this city and of other cities, and were familiar with the most approved methods of dealing with children. The playground movement is not something ephemeral, it is not a fad, destined to be short-lived and to pass away as a craze that has swept over the country. Undoubtedly there is the danger of loading down the movement with too many freak attractions, but the movement has a substantial reason for existence. The main success of the playgrounds will be due to the high character and ability of the supervisors of the playground work. A poor supervisor without aptitude for the work, without intelligence, sympathy and enthusiasm, is a hindrance rather than a help on the playground.

If the work on the playgrounds is to increase in efficiency it will be necessary that the appropriation for playgrounds be large enough to furnish and to maintain suitable apparatus on grounds in all of the congested parts of the city and to employ supervisors with experience and skill. The amount and the nature of the aid for the playground movement in this city that has been given by the Middlesex Women's Club and by the College Club cannot be overestimated. Miss Elizabeth C. Kennedy of the Women's Club has labored tirelessly and very successfully in aid of the playground movement, and Mrs. Lam-

bert of the College Club has aided very materially in the work, more especially on the Aiken Street playground. If the work is to continue in efficiency it will be necessary, not only to increase the appropriation for playgrounds, but to keep alive and to increase the public interest in the work.

TREES

There are many applications each year for the removal of trees or for the trimming of trees, resulting in many hearings before the Commission. There are more callers at the office and inquiries made of the Commissioners concerning trees than are made for any other purpose.

There are many trees in the city that should be removed by reason of their being in a dead or decaying condition, making them unsafe for the public, and a large amount of trimming of the trees should be done. A generous appropriation by the city council for the department of trees would speedily improve the conditions in the city with respect to trees. The Commission no longer has the power vested in it to remove the pests that infest the trees. It has been made apparent the past season that decisive action should be taken to protect the trees of the city from the many pests that prey upon the trees and spoil their beauty.

The appropriation for trees this year was \$1000.
83 trees were removed.
Over 200 trees were trimmed.

NEW LANDS.

Two or three tracks of land have been added to the parks of the city the current year. The commission has made recommendations to the City Council relative to the acquisition by the city of tracts of land that have appeared to be especially desirable for park purposes, but no action has been taken upon the recommendations.

CONCLUSION.

The citizens, by their recent action at the polls, have decided to make a change in the management of the affairs of the city. The desire to improve conditions is manifest by this action. It is to be hoped that not the least of the benefits that are expected to be of advantage to the public will be an increase in the means to improve the departments that are peculiarly allied to the health and recreation of the public.

The superintendent has been efficient in the discharge of his duties.

The superintendent of police is especially deserving of the thanks of the Commission for his aid in maintaining order on the commons and playgrounds during the season.

The amount of the appropriation for parks for the current year was fourteen thousand dollars.

The amount expended was fourteen thousand dollars.

The amount of the appropriation for playgrounds was twenty-three hundred dollars.

The amount of the appropriation for trees was one thousand dollars.

The amount expended was one thousand dollars.

Respectfully submitted,

JOHN J. PICKMAN

JOHN E. DRURY

THALLES P. HALL

HENRY F. CARR

HARVEY B. GREENE

Financial Report

LOWELL, MASS., December 31, 1911.

TO HIS HONOR THE MAYOR AND THE CITY COUNCIL OF THE
CITY OF LOWELL, MASSACHUSETTS.

Gentlemen:

The Board of Park Commissioners have the honor to submit herewith the Ninth Annual Report of the Park Department of the City for the fiscal year ending December 31, 1911. In presenting you this report we have given a statement of the receipts and expenditures for the fiscal year, the financial condition of the several appropriations, the Superintendents report to this department of the work and labor done in the Parks and Commons of this City.

Appropriation for Labor,.....	\$10,000 00
Receipts for Labor,.....	15 33
	<hr/>
Total appropriation for Labor,.....	10,015 33
Expended for Labor,.....	10,015 33
	<hr/>
Balance,.....	00,000 00
Appropriation for "Other Expenses,".....	4,000 00
Receipts,.....	299 00
	<hr/>
Total appropriation for "Other Expenses,"	4,299 00
Expended for "Other Expenses,"	4,299 00
	<hr/>
Balance,.....	0,000 00

We received from the rental of lots on the South Common on July 4th the sum of \$1,136.00, which was paid into the General Treasury Fund of the City.

TO WHOM AND FOR WHAT MONEY WAS PAID OUT DURING THE YEAR

TO WHOM	FOR WHAT	AMOUNT
Harry C. Kittredge	repairs	\$ 1 25
New Eng. Tel. & Tel. Co.	telephone service	50 64
Norcross & Leighton	insurance	100 80
Lowell Water Works Dept.	water, castings, etc.	55 48
Lowell Electric Light Corp.	light	25 71
The American City Pub. Co.	subscription	1 00
Pratt & Forrest Co.	lumber	10 09
Suffolk Eng. & Electro. Co.	half-tones	54 60
G. C. Prince & Son, Inc.	stamps & postal cards	30 50
J. H. Sparks	veterinary service	5 00
E. E. McCauslin	hay	265 89
Paul Vigeant & Co.	oats	50 14
Boston & Maine R. R. Co.	freight	60
Bartlett & Dow	staples, screws, etc.	114 18
The H. R Barker Mfg. Co.	hose bibb, valves, etc.	28 42
Donovan Harness Co.	repairs	77 07
Dumas & Co.	binding magazines	22 15
John J. Donnelly	shoeing	119 35
Charles E. Galley	repairing typewriter	2 45
Engineering Dept.	services	30 28
C. N. Rice	filing saws, keys	1 00
Union Printing Co.	printing	18 25
Joseph Mullin	oats	123 14
Enterprise Foundry, and Fence Company	fence and gate	60 00
N. Y., N. H. & H. R. R. Co.	freight	12 27
Middlesex Registry of Deeds	recording deeds	1 55
Thomson Hardware Co.	hardware	2 85
C. I. Hood Co.	printing reports	163 80
F. L. Emerson	manure	12 94
C. B. Coburn Co.	deep sea line	46 74
Charles E. Gee	sharpening tools	27 65
John A. Thompson & Co.	rakes, hammers	39 40
Charles A. Whittet	railway expenses	2 60
Wilder and Wotton	oats	441 59

TO WHOM	FOR WHAT	AMOUNT
John Brady	teaming	155 00
Edward Cawley	cement, pipe, etc.	33 93
Church St. Auto Corp.	auto hire	10 00
E. F. Hathaway	signs	6 00
Middlesex Auto Co.	auto hire	8 50
Props. Locks & Canals Co.	lease	15 00
American Express Co.	express	1 38
E. P. Bryant	repairs	44 13
Burnham & Davis Co.	lumber	19 20
C. H. Hanson & Co., Inc.	horse hire	117 20
Amasa Pratt Co.	lumber	36 38
Charles E. Walsh	brooms	6 00
Robin Hill Nursery	shrubs	158 53
Rice & Co	grill work	40 70
Framingham Nurseries	shrubs	20 00
Charles E. Howe & Co.	lattice	5 00
Fred Jenness	sod, loam	120 83
The Bay State Nurseries	shrubs	169 75
B. F. Lewis	painting wagon	11 00
Davis & Sargent Co.	lumber	2 60
H. C. Girard Co.	flower bed guard	49 50
Lowell Co-operative Asso.	manure	67 36
O'Donnell Dry Goods Co.	eyelets	25
Ervin E. Smith Co.	oil, paint	3 23
Talbot Dyewood & Chemical Co.	sanitary fluid	2 15
The Boston Regalia Co.	flags	59 00
The Robertson Co.	use of chairs	75
George R. Morse	shoeing	2 00
The Ashton Valve Co.	fountain fixtures	9 00
James Whittet	lumber and labor	9 24
George M. Foster	oats	57 40
Olmsted Bros.	plan and prints	106 47
Wm. E. Westall	window shades	50
Daniel T. Sullivan	brick and cement	48 25
Whittet & Co.	plants	381 03
Tucke & Parker Co.	cord, plugs, etc.	1 66

TO WHOM	FOR WHAT	AMOUNT
Pevey Foundry Co.	castings	12 27
W. P. Brazer & Co.	bats, balls, tape, etc.	42 63
R. J. Haight	subscription	2 00
Buildings, Wages and Other Expenses	lumber, box, nails, etc.	16 38
J. B. Cover Co	seed	51 44
T. J. McDonald	oats	63 98
Fred M. Prescott	hoof life	6 00
Suburban Life	subscription	3 00
Sampson & Murdock	directory	3 00
J. T. Williamson	iron work	1 25
E. A. & A. T. Smith	concrete work	241 48
J. A. Boucher	oats	63 75
J. A. Brien	stove	13 52
		<hr/> \$4,299 00

MAINTENANCE

NAME	LABOR	MATERIALS
North Common,	\$ 668 51	
South Common,	973 72	
Fort Hill Park	2,295 27	
Fort Hill Park, West Side,	3 75	
Belvidere Park,	78 34	
Tyler Park,	98 87	
Mt. Vernon Park,	40 34	
Monument Square,	33 81	
Lincoln Square,	2 43	
Varnum Park,	8 76	
Penniman Park,	6 84	
Water Works Square,	3 38	
Shedd Playground,	5 76	
Hovey Square,	10 24	
Mansur Square,	7 71	
Coburn Park,	23 80	
Lenox Square,	17 87	
Franklin Square,	12 36	
Princeton Square,	12 36	
Middlesex Square,	2 20	
Lincoln Playground,	55 71	
Little Canada Playground.	61 60	
Varnum Avenue, River-bank,	10 90	
Colonial Avenue; River-bank,	58 16	
City Hall and Memorial Grounds,	111 06	

IMPROVEMENT

LABOR	MATERIALS	TOTAL
\$ 3 61	\$285 87	\$ 736 99
1,068 42	228 37	1,318 76
1,002 68		4,074 09
		1,006 43
		101 14
1 63	4 44	105 94
		44 84
		50 47
		2 43
2 15	5 28	16 19
1 31	8 76	16 91
7 80		11 18
61 50		67 26
1 00		11 24
1 09	6 36	15 16
		23 80
51 05	3 74	72 66
48 17	81 90	143 43
		12 36
		2 20
209 68	48 34	313 73
		83 91
		17 57
		64 83
259 09	700 77	1,070 92

MAINTENANCE

NAME	LABOR
Lenox Street Stable,	\$ 560 99
Workshop,	11 81
Supplies,	
Office Expenses,	1,696 00
Hillside Park,	
Harris Oval,	14 12
Parker-Spalding Park,	
	<hr/>
	\$6,886 66

IMPROVEMENT

	LABOR	MATERIALS	TOTAL
	\$ 168 73	\$ 56 66	\$2,369 65
			106 12
			117 35
			2,026 51
	100 79	15 50	116 29
	1 00	5 67	20 79
	137 97	20 75	173 18
	<hr/>	<hr/>	<hr/>
	\$3,128 67	\$1,472 41	\$14,314 33

BALANCE SHEET, DECEMBER 31, 1911.

DR.		CR.	
North Common,	\$ 736.99	Appropriations,	\$14,000.00
South Common,	1,318.76	Receipts,	314.33
Fort Hill Park,	4,074.09		
Fort Hill Park Baseball Grounds,	1,006.43		
Belvidere Park,	101.14		
Tyler Park,	105.94		
Mt. Vernon Park,	44.84		
Monument Square,	50.47		
Lincoln Square,	2.43		
Varnum Park,	16.19		
Penniman Park,	16.91		
Water Works Square,	11.18		
Shedd Playground,	67.26		
Hovey Square,	11.24		
Mansur Square,	15.16		
Coburn Square,	23.80		
Lenox Square,	72.66		
Franklin Square,	143.43		
Princeton Square,	12.36		
Middlesex Square,	2.20		
Lincoln Playground,	313.73		
Little Canada Playground,	83.91		
Varnum Avenue, River-bank,	17.57		
Colonial Avenue, River-bank,	64.83		
City Hall and Memorial Grounds,	1,070.92		
Hillside Park,	116.29		
Harris Oval,	20.79		
Parker-Spalding Park,	173.18		
Lenox Street Stable,	2,369.65		
Workshop,	106.12		
Supplies,	117.35		
Superintendent's Salary and Office Expenses,	2,369.65		
	<u>\$14,314.33</u>		<u>\$14,314.33</u>

General Superintendent's Report

TO THE PARK COMMISSIONERS:

GENTLEMEN:—

I have the honor to present, for your consideration, my Ninth Annual Report of the maintenance and improvements of the parks during the year ending December 31, 1911.

I believe the policing of the parks can be better done by the park board than by relying upon the regular police force of another department. It has been the experience of the park department that the policemen appointed by the regular force do not take as great an interest in enforcing the park ordinances, as a policeman who is specially educated for park work. A man who has been employed as a laborer or gardener, or foreman in the parks will generally be more efficient than one who has not had any experience in park work.

The work of a park policeman is essentially different from that of a city patrolman. Violation of the park ordinances is rarely of a criminal nature, or due to malicious conduct, but is due usually to heedlessness or thoughtlessness of people of good intentions.

It is his duty to enforce the rules and regulations, prevent rowdyism, gambling, carousing, noise and disturbance, and to preserve peace and good order, so that all persons

can visit and enjoy the parks without fear of insult or molestation.

I believe the policing of our parks is a matter of importance and should receive your careful attention. With the park police under the immediate control of the Board, but required to obey the orders of the Superintendent, there is no divided authority.

Another matter of importance is park help. To obtain the best results a constant effort must be made to keep the most efficient men and weed out the careless and indifferent. The employees should generally be kept in the service for as long a time as possible and should be encouraged to make their work a life work and not a makeshift until something else turns up. One of the great drawbacks towards the employment of the best men on parks is the effort of good men and women to get places for persons simply because they need money to support themselves. My experience has been that employees who rely upon influence to get work are not nearly as efficient as those who seek work themselves and rely upon their own abilities to keep their places. There is also a tendency among business men who have received the faithful services of a man during the best years of his life to unload him on public works when he is old and useless. The money paid to this kind of help is thrown away as far as accomplishing labor is concerned, because these useless men frequently draw the same pay as the better men, who become discouraged in their effort to excel when they get no more pay than a charity man.

If it be the policy to make places for a proportion of the almost useless men, whose friends endeavor to saddle them on the superintendent, some provision should be made to grade their pay according to their ability to earn the money they get.

In the present extent and condition of our parks, almost nothing can be done in the way of further development or for the adequate equipment which the rapidly increasing public use makes imperative without increasing expenditure.

Every tree or shrub planted, every flower-bed laid out, every walk or roadway built, every swing put up, every ball-field opened, becomes at once a continuing charge for maintenance.

It is doubtful economy to allow all improvements of our parks and even their adequate maintenance to be deferred from year to year until the burden becomes too large to be met by the appropriation of any single year.

SOUTH COMMON.

I would renew my recommendation that the pond on the South Common be turned into a wading pool. The cost would be about \$2,500, and wading pools are acknowledged to be great favorites with young children. They are very economic arrangements because they offer places for skating in the winter, and in summer the children can splash in the water, thereby gaining much comfort. I would recommend that trees be planted on both sides of the paths on the upper side of this common, that 3250 yards of concrete be laid, as the walks are in need of immediate attention, that the band stand be removed and replaced by one of brick or cement. The walk from the corner of Thorndike and Summer Streets to the pond has been re-laid, and several dead or dangerous trees and limbs have been removed. A new back stop of iron has been placed on the ball grounds.

FORT HILL PARK

Heavy storms still prove a menace to the many paths and roadways at this park, and a drainage system has

become practically a necessity. Repairs must be made after each storm which simply means a continual waste of money, whereas, if the grounds were properly drained and the roadways macadamized, this expense would be uncalled for.

Granolithic is considered the proper material for paths; for neatness, cleanliness and stability it out-classes anything in existence today, and the coming year should see a considerable amount laid.

One of the chief demands of this park (and it is equally true of all our large parks and commons) is to afford sanitary toilet conveniences for the men, women and children who take advantage of these breathing spaces. I would recommend that this matter receive your careful consideration.

The work of maintenance went on as in former years, the roads being repaired, grass kept cut, and the park kept policed, lighted, etc. A new bed of shrubs was planted east of main entrance, the cobble well-house was reinforced by a wall of cement, a sanitary drinking fountain was installed in place of the old iron fountain and floor laid with granolithic, a granolithic walk was built from Park Avenue to the walk back of the well-house, a large track of land west of entrance was plowed, manured and sown with grass seed, a walk on the Rogers Street side of the park from the entrance to Hanks Street has been dug out to a depth of 18 inches, and a width of nine feet and filled in with cinders and will be completed next year with granolithic. Two catch basins have been built and 200 feet of sewer laid. To keep this park in good condition it will be necessary to plow up the tract of ground on the easterly side of the entrance and that on the southerly side of Park Avenue, the same to be

manured, regraded and seeded, as at present the grass has run out. I would recommend that a larger water pipe be laid in the park and that more lights be furnished.

PARKER-SPALDING SQUARE.

This square containing 1875 feet lying between Crescent and Parker Streets, has been graded, loamed, manured and seeded and is an ornament to that neighborhood. The old elm tree which was a menace to the public has been removed.

HILLSIDE PARK.

On June 22, 1911, the following order was approved by the Mayor and City Council:

ORDER:

Transferring custody of land at junction of Houghton, Parker and Plain Streets from the Street Department to the Park Department.

Ordered,—

If the Board of Aldermen concur, That a portion of Houghton, Parker and Plain Streets, shown on plan numbered 1462, recorded in the office of the City Engineer, City Hall, containing about two thousand six hundred seventy (2670) square feet, and designated on said plan as Hillside Park, be set apart and reserved for a public park, the same to be in the care and control of the Board of Park Commissioners.

This park has been laid out, graded, loamed, manured and sodded and is an improvement to that neighborhood.

HARRIS OVAL.

On June 22, 1911, the following order was approved by the Mayor and City Council:

ORDER:

Transferring custody of land at junction of D Street and Harris Avenue from the Street Department to the Park Department.

Ordered,—

If the Board of Aldermen concur, That a portion of D Street laid out by Resolution of the City Council, December 6, 1910, shown on plan numbered 1487, recorded in the office of the City Engineer, City Hall, as an oval, the transverse diameter of which coincides with the centre line of D Street and is about one hundred six (106) feet in length, and the conjugate diameter of which coincides with the centre line of Harris Avenue and is about sixty-two (62) feet in length, and containing about five thousand two hundred thirty (5230) square feet, be and the same hereby is set apart, and reserved for a public park, the same to be in the care and control of the Board of Park Commissioners.

This oval has been kept in good condition.

LINCOLN PLAYGROUND.

A strip of ground 300 feet long and 30 feet wide has been fenced apart from the playground proper, regraded, seeded, and planted with trees and shrubs. I would recommend that a hedge be planted on the southerly side from the fence to the back line of the property, the bank graded, loamed and planted with shrubs; that a back stop be erected for the ball grounds.

LENOX SQUARE,

Has been regraded and reseeded and presents a very neat appearance.

CITY HALL GROUNDS.

The grounds in front of this building and in the Merrimack Street side has been regraded, turfed and planted with shrubs. On account of lack of funds it was impossible to complete all of the grounds, but hope to complete them early next spring.

SMALL PARKS.

The smaller parks and squares received careful attention throughout the year. New trees and shrubs were planted wherever and whenever wanted.

LUCY LARCOM PARK

Has been improved by the planting of a large bed of Rhododendrons at the Merrimack Street entrance which presented a beautiful appearance this spring with their varieties of color. Seats and electric lights have been placed in the park, and it has been kept in good condition and well policed.

SCHOOL GROUNDS.

The time has come when those children who can remain in our public and parochial schools but a few years should be taught something of botany, the life of birds, and the elementary principles of natural sciences and landscape gardening. All public school grounds should be made beautiful and receive the same thoughtful and skillful care as public parks and the grounds of private citizens.

Environment in school yards appears to exert as important an influence upon the ethical development of the pupil as environment in the school room. In the past more attention has been given to the latter to brighten

the surroundings of the pupils and to inspire in them pure and vigorous impressions, the former has come more and more into prominence, especially in connection with industrial work, in agriculture and in nature study.

The value of agricultural work, not only from an educational but from a practical standpoint, has been recognized. The natural inclination to turn from the school room to the sunshine, flowers and soil, with healthier and freer impulses, is far too important a factor towards the development equally of physical, moral and intellectual strength, to be ignored.

At each school room a small plot of ground should be set aside as a garden for practical demonstration; class room work to be resorted to only when necessary to illustrate some point involved in the outdoor operation.

A number of the teachers in the city have done something towards beautifying their school rooms and school grounds. Some of them have done a great deal, and very attractive indeed are some of these rooms and premises.

I believe that the time is near at hand when the school premises will be models for the neighborhood for taste, order and neatness. Decorate your schoolroom, plant trees about your school yard, have a school garden, letting the children have a part in all the work, and you have built more for character than you may know. Very few of us realize the silent power exerted through beautiful school rooms and grounds.

Manual training and nature study, it seems to me, afford just the kind of employment needed by school children. They give the desired change from strictly intellectual work, and to nine out of every ten pupils they give enjoyable occupation. I believe that the solution of the problem will come with the introduction of school gar-

dens, the planting of trees, shrubs and flowers in school grounds, and similar work in the home grounds, all of which work the pupils will help to design and execute.

And right here is where the members of the park commission can help. You can encourage the teachers and pupils to improve their school grounds, you can assist them in making designs for this work, you can tell them what trees, shrubs and flowers would be best to plant, and in a hundred other ways which will occur to you, if you give the matter thought, you can enlist the aid of an army of young enthusiasts in the fight for the beautification of our city. And that fight you, who are engaged in civic improvement effort, will agree with me, is a fight for better citizenship, a higher plane of morality, and a stronger municipal integrity.

In the Spring of 1897 a plot of ground adjoining the works of the National Cash Register Company, which had been donated by Vice-President F. J. Patterson, was laid out in plats, 10 x 130 feet each. Fences were taken down, and work was begun on one of the first boys' gardens ever instituted in the United States, and owned by a corporation. There were forty gardens. Boys between the ages of eight and sixteen were enrolled in a class under the direction of an expert gardener, and put to work in this garden. That year, the boys were taught to raise twenty-four different kinds of vegetables. Each boy raised enough on his plat to support his family during the season. Whatever was left over was disposed of as the boy saw fit. Fifty dollars in prizes was provided the first year for the best six gardens.

This beginning proved a great success. The following year, 1898, the number of gardens was increased to seventy-one. These gardens have grown until now they have an area of over three acres.

The spread of school gardening work is little short of miraculous in the last five years. There are fully fifty times as many children in the work now as at the start, and the gardens have extended into nearly all of the states of the Union, to more or less extent. What was probably the first school garden in the United States was started in 1891 at the George Putnam Grammar School, in Boston, by Henry L. Clapp, master of the school, and was a success. Within three years the idea has spread from a few towns near Amherst to one hundred and fifty towns and cities all over the state. With a few hundred school garden students in 1908, the Massachusetts enrollment this year was 15,000.

At the Moody School the grounds in the front and on the westerly side have been regraded and seeded, trees and shrubs planted, and two flights of concrete steps and gutters have been laid. At the Lincoln School the ground in front of the building has been graded, loamed and seeded, and trees and shrubs have been planted. Greenhalge School grounds which were laid out last year have been kept in good condition.

PLAYGROUNDS.

The playground movement as an organized effort on the part of individuals in the community to secure greater opportunities for play is made necessary largely by the artificial conditions under which people live by the congregating of vast numbers of people in our cities, changing all the normal and simple relations of life that have heretofore existed and which still exist in the more sparsely settled country districts. It is hard for those who are not familiar with conditions to appreciate what they are.

Nearly all the large cities are finding out that playgrounds pay for themselves and acting accordingly. To a man who can see nothing else if a dollar is held up before his eyes, the expense of taking valuable city property and turning it into ground for the children to shoot marbles, play ball, roll hoops, etc., it is a ridiculous and unwarranted waste of money. But the facts of experience show that when city children are playing in the place prepared for them, under proper supervision, they are not learning to drink, to steal and to become criminals, One of the most burdensome of the public expenses is the prevention and punishment of crime, and playgrounds more than pay for themselves in decreasing the number of youthful criminals. New York has discovered the fact and realizes that it is far more economical to provide playgrounds than to build reformatories and penitentiaries.

Playgrounds are not desired from any maudlin sentimentality, but because they are the best means that have ever been discovered for making the children healthy and happy, for safe-guarding them from the vices and bad habits to which lack of proper space for normal amusement has always driven them.

The whole movement for playgrounds means supervised play—not restricted in any of its good qualities,—but robbed of its dangers and fitted to make the richest returns in health and knowledge to those who indulge in it. It is a work which entails a great deal of responsibility on those in immediate charge, but if done well, it cannot help but improve the young manhood of the city. The sums that are being expended for playgrounds in this country at present seem enormous, but the thing which it is sought to make is beyond price.

Within three years Chicago has spent \$6,000,000 in fitting up fourteen playgrounds, ranging from six to seventy acres in extent, and will open five new ones in addition ; she devotes over \$180,000 simply for their maintenance.

California recently set aside \$1,386,000 for playgrounds, of which San Francisco assumed \$741,000, giving \$20,000 to the new playground commission for maintenance.

Seattle, Washington, has this year 12 improved and equipped playgrounds and has spent for maintenance \$15,092.89, improvements \$51,902.95, land payments for new sites \$164,668.88 a total of \$201,664.72.

The plan of Dr. Harrington, of Boston, Mass., and which has been adopted in that city, is, I think, an excellent one. Its purposes are : First, to develop the school yard and school building as the centre of play for the younger children; Second, to provide local playgrounds for the older boys and girls; Third, to provide athletic fields for the high school boys; Fourth, to furnish instructors, supervisors and teachers in athletics, sports, games and play indulged in by pupils of the public schools.

The playground is a necessity and should be properly equipped and supervised. Some one objects that all this requires money. To be sure it does. Everything worth having costs money and also time and thought.

Under no circumstances should a playground ever be operated without trained supervisors, for if you do it will be a total failure and the playground will become not only useless but objectionable.

I believe that the larger playgrounds should be equipped at the earliest possible date with shelter houses, fitted with sanitary facilities, as I believe it to be of the greatest importance for the success of this department. I would

recommend that the Board of Park Commissioners make a careful study of the situation with the object in view of providing means for the accomplishment of this improvement.

If each playground were fenced it would insure better organization, better control and better results generally. The girls' playgrounds should be fenced and segregated from the boys', and where possible small children should be given a place to play removed from all other activities. A small part of the appropriation should be set aside so as to provide music for folk dancing at stated intervals.

The construction of a handball court on the playgrounds would add to the efficiency to a considerable extent.

There seems to be a growing sentiment in favor of providing places where children can play without encountering the dangers and degrading influences of the street and alley. The playgrounds have become in several cities an especially valuable agency for providing wholesome amusement during the most trying period for city children, the summer. Play is the normal occupation of childhood. It is almost as necessary to perfect development as are sunshine, water, air and food. How important, then, that means be given to lure him from the filth of the gutter and the pestilence that breeds therein.

In all playground work there is a fine display of spontaneous unselfish effort. Every citizen has an opportunity, and it is his duty to do something to promote this movement. He may not be able to establish a playground or provide means for conducting it. He can, however, use his influence with the city officials, arouse interest among his neighbors and friends, help secure suitable locations, point out ways and means and in a hundred ways help to create a sentiment in favor of providing a more wholesome environment for children and instruction which will bring them into more intimate and pleasant relations with the beautiful things in nature.

It may be of interest to know what other cities in Massachusetts are spending for playgrounds and with that object in view I have collected the following figures:

City or Town	No. of Baseball Fields	No. of Other Playgrounds	No. of Instruc- tors and Supervisors	Amt. spent for Equipment, 1911.	Amt. spent for Supervisors 1911	Salary of men Supervisors	No. Men	Salary of Women Supervisors	No. of Women	REMARKS
Beverly	4	2	3		\$ 500.00	\$15 per week	1	\$15 per week	2	
Brockton	1	6	7	\$ 306 15				\$15 per week	6	Superintendent of Schools, Supervisor
Cambridge	14	12	38	5,000 00		\$12 to \$15 per week	28	\$3 to \$12 per week		Are spending \$25,000.00 for construc- tion and equipment.
Chicopee	3	2	5	1,000 00	500 00	\$60 to \$100 per month	2	\$30 to \$60 per month	3	
Clinton	1	3	3	425 00	325 00	\$10 per week	3	none		
Fall River	5	4	1		Supplied by Civic Club		1			
Fitchburg	1	7	14	3,018 91	\$1,861 97	\$45 to \$75 per month	8	\$35 to \$60 per month	6	
Haverhill	2	2		1,700 00	736 00	\$15 per week	2	\$12 per week	2	
Holyoke	6	8	22	1,000 00	2,000 00	\$9 to \$37.50 per week	4	\$3 to \$16 per week	18	
Lawrence	7	4	4	3,696 89	858 00	\$60 per month	4			
Lowell	5	8	21	305 86	1,785 00	\$45 to \$100 per month	7	\$12 to \$60 per month	14	Baseball grounds are on Parks and Commons, \$209.14 caretakers and labor
Malden	9	3	6	325 00	675 00	\$75 to \$100 per month	3	\$50 to \$60 per month	2	

* New Bedford	3	8	33	800 00	200 00	\$10 per week	8	\$7.50 to \$12.50 per week	24	Playgrounds open six weeks
Newton	5	4	12	12,000 00			4		8	Supervisors paid for by private Subscription
Peabody	4	3	4	500 00	350 00	\$25 per week	2	\$14 per week	2	
Salem	8	6	14		2,500 00	\$60 to \$100 per month	7	\$50 to \$100 per month	7	
Somerville	6	7	20	1,000 00	1,531 60		5		12	\$4,000.00
Springfield	10	13	1 Supervisor 35 Instructors	2,500 00	150 00 per month	\$25 to \$75 per month	15	\$32 to \$75 per month	20	
Waltham	3	7		430 00	770 00	\$8 to \$20 per week	4	\$8 per week	3	Three school grounds open under School Committee who spent \$900 00
Westfield		1	1	200 00	200 00	\$12 per week	1			
Winthrop	3	4	4	250 00	500 00	\$75 per month	1	\$8 to \$10 per week	3	\$400.00 for improvement of grounds
Woburn	3	1		376 95						
Worcester	18	10	79	800 40	6,889 43	\$60 to \$75 per month	13	\$45 to \$55 per month	46	

* Superintendent of Schools had an appropriation of \$4,000.00 for playgrounds; they employed one Supervisor at \$200 00.

8 women directors	@ \$75 00 per month	
8 1st asst.	" 60 00 "	\$2,360 00 For Salaries
8 2nd "	" 45 00 "	1,640 00 For Supplies
8 men	" 60 00 "	<u>\$4,000 00</u> Total
8 janitors	" 30 00 "	

During the past year playgrounds have been maintained under supervision at Little Canada Playground, North and South Commons, Greenhalge School, Paige Street and at the Pond Street School and without supervision at Lincoln Playground and Fayette Street.

SHEDD PLAYGROUND

During the past year a large amount of excavation and filling has been done; a pond six acres wide has been laid out and a walk ten feet wide has been constructed around the pond; several hundred feet of roadway has been built and a large amount of rough grading has been done from the entrance along the Rogers Street side of the grounds towards Boylston Street and we have started to construct a wading pool seventy feet in diameter for the little children.

TREES.

There are few things that are more pleasurable and profitable than the intelligent, judicious planting of trees for posterity. The early settlers knew the character and value of trees and generally planted them correctly to give the best results. I believe that there is a due appreciation of park and street trees in our city by a certain class of citizens, yet our trees are fast decaying and dying, because the curse of politics renders it impossible to save them, and I am powerless to do what I would gladly do, and what should be done for the good of the city. To have the fine trees in our city go into premature decay through neglect or from political shortsightedness is a thing that this city cannot afford. To allow politics, indirectly, to ruin the trees is a thing that no thoughtful citizen should tolerate. The citizens should make a determined effort to save the trees of our city.

Ask the average person why he plants a tree and he will say invariably for shade, but there are other reasons; they add value to the adjacent property, they protect the pavement from the hot sun, they add beauty and comfort to the city street, they cool the air in summer and radiate warmth in winter. When planting trees plant them in good soil. Dig a pit four feet square by three and a half feet deep. Replace the sand and stones by good top soil mixed with well-rotted manure. See that the best soil is near the roots, dig the hole large enough to take the roots without crowding, cut off broken and injured roots with a sharp knife, make a clean cut, trim back the top to counterbalance the loss of roots, see that the earth is pressed firmly around and frequently as it first starts, keep the surface soil free from cakes or cracks, take up as large a root system as possible with the tree you dig; trees for general street planting should be nursery grown, because they have compact root systems, straight stems and symmetrical tops, and are accustomed to transplanting.

A tree is like a mill that runs itself, the raw material it uses are the mineral from the soil and the gases from the air, the leaves are the machinery that take charge of the raw material and makes it into the finished product, sap. that goes to feed every part of the tree, the sunlight is the power that runs the machinery, the waste products that the leaves send off into the air are the very things that we human beings need most, oxygen to breathe, and moisture. A full grown tree sends out 187 gallons of water a day through its leaves into the air, think what a difference this makes in hot, dry weather. Do you know of any other manufactory that runs itself, furnishes its own materials and gives away its products to bless and

brighten the world? Do you know that trees are the oldest inhabitants on the face of the globe? There are trees living in California that were already one thousand years old when Columbus discovered America. The trunk of a tree one foot in diameter and twenty feet high can bear a weight of over thirty tons, (61,600 lbs.)

The more one knows about trees, the more one wants to know; and the natural outcome will be both better economic and aesthetic conditions. People who plant trees do it for humanity and coming generations. What work could there be more noble? We should aim to add to the number of street trees by setting out new plantations; to conserve for these and for the older street trees. If we would promote the healthfulness and beauty of our city for the generations to come we would plant mile upon mile of trees in our thoroughfares, and give them systematic care, which would promote their development into sturdy and increasingly beautiful ornaments to our streets. In the planting of street trees we are far behind our sister cities.

In some parts of the city trees are dying and are being killed by various causes at a rapid rate. As they are not being systematically replaced there has ensued very great damage to the appearance of the streets and the beauty of the city, and the results must be disastrous in these respects unless prompt and intelligent action can check the destruction.

Merrimack Street was formerly one of the most beautiful streets in the city, lined with magnificent elms, whose interlacing branches formed a veritable arch. Half of these noble trees are now entirely gone, and others are in a state of dilapidation and decay which renders them a sad disfigurement to the thoroughfare.

At present the city is doing absolutely nothing in the way of planting trees on the streets. Such planting

is done by owners of adjoining property if so inclined, and they are not restricted in the number or kind of trees or the manner or place of setting them.

Once set, however, they become the property of the city. No one but the City Forester is allowed to prune them or to remove them when they die, and he is unable to do what is necessary through lack of funds and pressure of other claims on the appropriation for trees.

I desire to first speak of the causes of the present condition of the city shade trees, of what can be done to improve their condition and to replace those which die. The unsatisfactory condition of many of the shade trees in the streets is due to a number of causes acting together; no single one of them being chiefly responsible for the damage.

Many of the trees are of very great age. While under favorable conditions some of these trees may last for many years longer, their age must tell against them in their struggle for life under any circumstances. The exclusion of either air or water from the soil is surely and quickly fatal. It is a matter of common observation that a filling of earth two or more feet deep about thrifty mature trees will damage or kill them. This injury is caused by excluding air from the active rootlets.

The conditions of city life require that streets and sidewalks should be made hard and nearly impervious to water. As a result, the trees standing on or close by the streets, are greatly limited in their supply of both water and air, by water-tight and air-tight covering above their roots.

The roots of the trees have been constantly taking the available plant food out of the soil in which they have stood for years. A part of this matter assimilated by

the trees remains permanently in the wood and by far the larger part goes into the leaves which are cleaned up annually; the best success with trees cannot be expected on a soil which has supported their lives for years, unless the supply of plant food in the soil is supplemented by the use of fertilizers. The yearly application of some suitable fertilizer to the soil about shade trees is of the highest importance to increase their growth and—what is more vital—their thrift and their power of resisting unfavorable conditions.

A very large number of the trees have been and are now being injured and even ruined by the gnawing of horses, which contrary to the public statutes are hitched to them or left unhitched to bite and tear the tree trunks.

Another very destructive mutilation is the necessary cutting of large roots in digging for water and gas mains or sewers, and worse than this the cutting of main roots close to the tree or the cutting of the trunk itself in order to lay a curb-stone to line or make a cobble gutter. Another mutilation which has destroyed many trees or greatly marred them is unskillful trimming and neglect of the scars left by it. Many large limbs have been sawed off, leaving bare wounds almost horizontally exposed, to catch and hold the rain and entirely unprotected by anything like paint to keep the water out. Decay naturally begins here, and spreads into the body of the tree.

A further mutilation very evident in some places is the chafing of the bark by electric light and trolley feed wires. In some cases the bark has been wholly destroyed on one side and the limb killed. Every year some trees or parts of trees are broken off by severe gales, the injury usually occurring to trees which are not in a very thrifty condition.

Many trees have been killed by illuminating gas which is extremely poisonous as well to the roots as to the leaves of trees. A considerable leak from a gas main, under repair, during a single night has killed trees standing near, and a very slight leak for a longer time will infallibly kill them. Many trees have been killed by this cause, the damage often being done before the leak was discovered.

The insects which commonly injure street trees I have spoken of in my previous reports. What can be done to improve and protect the shade trees? For old age there is no remedy! In times of extreme and protracted drought trees suffer in common with all vegetation and should of course be helped by watering once a month while the drought lasts with a volume of water at least equal to one-half the normal average rainfall. The lack of plant food may be supplied by a regular annual dressing with a moderate amount of fertilizer put on the surface. Mutilation of trees by horses, by street work and by electric wires are covered by regulations which are suitable and sufficient for the protection of our trees if thoroughly enforced, which they manifestly are not and perhaps practically cannot be. However, more might be done in this direction and I would suggest that the police be instructed to take notice of all infractions which come to their knowledge and that the offenders be vigorously prosecuted.

The regulation of stringing electric wires is a delicate and difficult matter and we might require all such work to be done under the supervision of an inspector. I know of no way to prevent the cutting of roots in the laying of curb-stones, gutters, side-walks and street mains, as it is necessary that we have properly constructed streets, and heat, light and water systems are indispensable municipal requirements.

All trees near the curb and within the reach of horses should be protected so that they cannot be bitten or gnawed.

That the young trees be surrounded by wire netting so adjusted that it will not bind or cut the bark as the tree grows. On large trees netting be fastened on the street side.

When the limbs of a tree are amputated extreme care should be taken to make the cuts close to and perfectly even with the trunk. When the pruning is done in this manner the wounds heal more quickly than if stubs of the branches remain, and after healing there are no unsightly bulges at the point of cutting. After the removal of a branch the wound should be painted with a coat of coal tar.

Nothing can be done to protect the trees against the wind other than to keep them in as strong and thrifty a condition as possible, so that their power of resistance will be greater.

Trees can be protected against all leaf-eating insects if the foliage is kept well covered with poison during the early part of the summer. A thorough spraying should be given the trees as soon as the leaves have unfolded. Another application should be made two weeks later. In a dry season like the past, probably no other spraying would be necessary, but if rains were frequent four applications might be required to keep the foliage well poisoned up to the first of July. Arsenate of lead is perhaps the best poison to use for this purpose.

I would recommend,

That the stringing of electric and all other wires be done under supervision of the Board, and that the supervision be paid for by the company doing the work.

That when trees are killed by gas leakage from the mains the owners of the mains be required to pay the

cost of the removal of the trees killed and of planting new trees in their places.

That all dead wood in the trees be removed.

I would also recommend that an appropriation of \$5,000.00 yearly, be asked for so that the foregoing recommendations can be carried out.

During the past year a great many dead or dangerous trees have been removed, as well as several which interfered with the construction of new buildings; a great many requests for the removal of trees were received, but it was deemed inexpedient to comply with all the demands. A large amount of trimming and removal of dead and broken limbs was done.

REMARKS

Parks come into existence either through a general public demand inspired by men of higher intelligence, broad-minded and with a love for nature, or through the benevolence of some generous, loyal and public spirited citizen.

Parks are a necessity for the cultivation and preserving of a love for nature. They are seats of learning for the average city bred being, and their influence is plainly visible in shaded streets and pretty home surroundings. They are necessary for the self-preservation of those who by free will or through forced circumstances have made their homes in a large city. A beautiful park is a lasting monument of nature and art, a practical demonstration of culture and refinement, to which the municipality may point with pride and honor.

Nature and art are to go hand in hand crowned with the highest attainments possible by human conception, thereby adding to the prestige and good name of any city, and making life in these piles of bricks and mortar worth

living. Park making is a measure by which, together with other great municipal undertakings, the intelligence of its citizens is judged.

The true function of a park is to afford a refuge to the dwellers in cities where they may escape the sights and sounds and associations of the city, where the eye may feast on the beauties of nature, and where the body and mind may relax and find repose.

A park, then, should consist of natural objects, turf, water, trees and shrubs, arranged by the art and skill of man, so as to afford the greatest possible pleasure and enjoyment to the people, with no artificial objects which are not essential to their comfort or convenience.

To erect in a park, buildings, bridges or other structures which are not absolutely essential, or to make them more conspicuous than is unavoidable, to multiply statues, or to introduce unnecessary formal or architectural features, is to defeat the first object of a park.

When the appropriation for park maintenance is inadequate, (and that is always the case with us), it is often a question what work to give the preference. In nearly all cases some work must suffer, and what work shall be allowed to suffer? It is easy to see when the public is put to some inconvenience how to provide a remedy. But to see what work is the most important to do so as not to cause an irreparable loss is sometimes difficult, and if seen by the park commissioners or the superintendent, how can the work be done with sufficient tact not to offend the public beyond endurance. The athletic grounds, ball grounds, etc., must not be neglected or a mighty wail will be heard. The showy flowers must be maintained, for the people demand them, but the shrub collection, the pinetum and the trees might be neglected and few

would know the difference. And so the temptation comes to neglect that which, in my opinion, is most essential to maintain, for the injury caused by the neglect of the trees is irreparable, while the neglect of the roads and the care of the grounds for games can be remedied as soon as money is forthcoming.

What feature of the parks is most essential to preserve in case some things are to be sacrificed? Should the beautiful landscape, with the great rolling lawns, and the grand old isolated tree or group of trees, the groves and the sky views, which go to make up the quiet, restful place of recreation be maintained, or shall the parks be fitted for those who lead a strenuous life, the ball players and the athletes?

It seems to me that the great restful recreation grounds for the recuperation of the overworked and weary should be maintained in preference to grounds for exciting games, if all cannot be maintained.

I invite you to consider how the wholesome, joyous use of our public parks can be promoted. One indispensable condition for the adequate use of public parks is security against violence, and fear of violence, and even against annoyances, or the sight of rude or disorderly conduct. All our public parks, whether large or small, need to be well policed, so that women and children can feel perfectly safe in them. This is of course an expensive matter, but neither playgrounds nor parks will be adequately used by the persons who need them, unless they are intelligently and adequately policed. Every park and square should be brightly lighted; first, because light is the best policeman, and secondly, because every such open space should be treated as a public parlor. There should be an ample and convenient supply of water; there should be shelters from

the sun or sudden rain; and there should be everywhere a perfect tidiness. Regulations against scattering paper, and leaving behind remnants of food, or boxes or bottles should be rigidly enforced ; but the habit of eating in the open air in families or companies of friends, should be vigorously encouraged and promoted and ample provision should be made for this eating and drinking in the open air. It is legitimate and desirable to provide rustic tables and benches in places suitable for lunch or supper parties, for some men and women object to sitting on the ground even when it is dry.

In parks the enjoyment of the people can be greatly promoted by providing numerous seats at the best points of view. We should tempt the people to linger in the parks for hours, and to do this without covering great distances, or enduring anything which can properly be called fatigue. It is the open air and the quiet aspect of nature which are wholesome and refreshing; and to get the benefit of these influences takes time and a sense of leisure and restfulness.

A very important use of our parks should be the use by school children, under the direction of their teachers in nature study. Now parks and their decorative borders afford an opportunity to teach children much about trees, shrubs, herbaceous plants; and these public provisions should be diligently utilized for this purpose. They can be put to no better use than this, for it is the children who are most capable of acquiring a love of natural beauty, and a knowledge of the elements of that beauty. It is they who can quickest learn to understand the workings of the forces which have made the hill and the valley, the pond and the brook, the bushy pasture and the arable fields. It is they who can best learn to recognize the constituents

of the commonest ground-covers in a given locality and to appreciate the changes which civilized man makes in the landscape. It is the children, trained in this way, who will grow up with a love of the parks, and a keen desire to spend time in them. It is they who can best acquire the out-of-door habit, and the love of walking, botanizing, collecting specimens of rocks, minerals, insects, birds and observing temperatures, winds, clouds, rain-falls and the changing aspects of the heavens at night. To see these things it is necessary to get into the open. The narrow city street, paved and bounded by high walls gives the children no chance for observation of nature, but in spite of this defect, it is the best available means of giving city children some conception of the natural world, and some permanent resources for life-long, innocent and healthful enjoyment. I would have not only the brilliant, cultivated flowers, native or exotic, which may be made to illuminate our parks with a series of striking forms and colors, but also the quieter series of blooms which our woodlands, pastures and brooksides may show, from the anemone, violet, iris and flowering dogwood, by the shadbush and magnolia, through clethra and golden rod to asters and the fringed gentian.

It is a safe guard for society to provide means of pleasure for men, women and children together. The pleasures men share with their wives and children are apt to be safer pleasures than those they take by themselves. In pleasures thus shared there is much less likelihood of coarseness, or excess, or careless selfishness. They cultivate considerateness, gentleness, and tenderness toward the young or feeble.

The extension of the usefulness of our schoolhouses is another matter of importance, the value of which can-

not be easily overestimated. The old idea that a schoolhouse was something to be shunned except for five hours a day five days a week for eight or ten months in a year, is yielding to the newer and more wholesome one that a schoolhouse should be the centre of communal life, a thing of beauty and uplift, and a factor in the life of every man, woman and child within sight of its wall. In New York many of the schoolhouses are now practically open the year round. Not only for the instruction of the young, but for municipal lectures on geography, history, natural sciences, art and kindred subjects for the adults and as vacation schools during the summer. On the East Side many are thrown open during the summer evenings as places of recreation. Band concerts, dancing pavilions and sandpiles are provided, so that those whose lives are narrow and contracted with little outside of the usual round of hard duties may get a little change and uplift under proper influences.

Who can estimate the immense value of all these agencies in the coming generations? We have no standard by which we can gauge them, but of their beneficent influence there is no doubt. Every influence which tends to make good citizens should be carefully cultivated. True, there are many beneficial influences at work in our city, making for a better city and for better citizens, but after all, these efforts are mostly voluntary, mostly spasmodic and often without any correlation to similar efforts. What we need in our city is a complete and thorough understanding as to the work to be done and the part each is to play in accomplishing it. Duplication of efforts and consequent friction must be eliminated if we are to make real progress.

We cannot expect to make an artistic whole of our city unless those who are concerned in its welfare have artistic inclinations.

CONCLUSION.

In closing my report I wish to express to the members of the Board of Park Commissioners my fullest appreciation for their support and their good-will, and wish to thank the employees of the department for the efficient services rendered, making it possible to accomplish all that has been done.

Respectfully submitted,

CHARLES A. WHITTET,
General Superintendent.

SOUTH COMMON PLAYGROUND

REPORT OF MISS MILDRED H. DUNN, SUPERVISOR

To the Park Commission:

On July 1st the directors of the South Common Playground, Miss Mildred H. Dunn as director, with Miss Faith Doty and Miss Mable Haggerty as assistants, began their work at the conference of workers at the rooms of the Middlesex Women's Club. On July 3rd and 5th they co-operated with the other workers, by the preparation of the industrial material for all of the grounds. On July 6th the active work on the South Common began. The first few days sufficed to show that these few workers were altogether inadequate to manage the number of children who thronged the ground in the afternoon. The services of Miss Adelaide Noyes were obtained for story telling and industrial work for the afternoon. The average daily

attendance was six hundred. The largest day's attendance was seven hundred and the smallest attendance was three hundred fifty.

In connection with the playground a room in the Eliot School was procured for use on rainy or damp days, for talks to the mothers and girls, and for practice of the folk dancing. Once a week talks were conducted by Miss Morse, a trained nurse from the Milk Station, on Health and Hygiene. It seemed best because of the noise and publicity to have these talks indoors. No chairs were available, however, the seats having been removed for the dancing and the mothers could hardly be expected to manifest much interest when they were obliged to stand. For this reason the talks were not altogether satisfactory. Miss Morse also visited the homes or cared for any cases needing attention. A physician visited the ground weekly giving advice as to the treatment of any cases needing medical supervision.

The tickets supplied by the Park Commission were used in giving children outings. One hundred and fifty children were taken in small groups to the outlying country to spend the day in fields and woods. Twice permission was obtained from the Railway Company to use the abandoned dance hall at Mountain Rock for dressing, and bathing was enjoyed. Three girls learned the swimming stroke and only need practice to become good swimmers. If a portable tent could be provided, much more could be done along this line another year.

The baths in the basement of the Eliot School were this year partitioned off to form separate compartments, that the girls might have more privacy in bathing, and a mixer was installed. Soap was provided and from the time these were opened their success was assured. The time

was divided into eleven periods. Four of these were reserved for the use of the girls and two of these periods were shared with the girls from the North Common. The two afternoon periods when an instructor could not be spared from the ground a trained nurse was in attendance.

One of our visitors kindly donated a small bath tub in which the infants and small children were bathed by the attendant while the little mothers enjoyed their bath.

These baths were a little late in being opened for use and later in the season, through necessary repairs to the heating apparatus, we were for two weeks deprived of the use of warm water. This materially reduced the utility of the baths for the girls which was very evident in the attendance. The average daily attendance was seventy. The largest day's attendance was one hundred seventy, and the smallest attendance was thirty.

The industrial work and folk dancing claimed their share of the time. The industrial work which was displayed in the windows of Dows' Drug Store on Merrimack Street, as in the previous year, the last few days of August, showed some of the features of this work. There was the same wide range of articles as of last year. An effort was made to include every child who wished to take part in this activity. The special aim of this work was to assist the child in developing his potentialities of creative play.

The folk dancing was an important part of the work. As the director could not absent herself long from the ground the dances were taught out of doors, the children going to the school once a week for practice with the music. In the choice of dances we have tried to recognize how much the foreign born people bring us, not only in their labor, but in the wealth of their literature and music expressed in the folk dance.

On two occasions public demonstrations were arranged, a Local Day and the final Play Festival. These exhibitions are not merely entertainments, but are closely related to the whole movement of play. They serve to make the children feel the importance of the work and also serve as a stimulus to those who find it difficult to adjust themselves to our social environment.

Throughout the department it has been the purpose to give every branch of playground activity its proper proportionate value, but to carefully avoid exaggeration of any activity.

RECOMMENDATIONS.

The sand boxes should have covers to be locked or bolted on at night. Fresh sand ought to be provided and the old sand taken away frequently. Old sand might be used for jumping pits possibly.

Baby swings should be provided in a well shaded section. The swings ought to be so arranged that they may not be used during the absence of the director at the noon intermission or a special attendant be provided for that time.

Fresh sodding should be provided for the space reserved for the volley ball court or a clean gravel court provided. The fine black dirt which soiled and choked the players the past season limited the usefulness of the court.

Separate apparatus for girls and a place to store apparatus and industrial work provided.

All industrial material should be kept in the school-house near the grounds after being divided.

SUGGESTIONS OF R. E. GUILLOW,
SUPERVISOR.

1. The size of the city, the number of playgrounds and the business connected with this movement demand a separate and distinct head or department, if the best results are to be obtained with the time and money expended.

2. This department should have its own superintendent. He should have a perfect knowledge of all the details connected with playground work, understand the principles of play and how to teach. He should have full power to hire or discharge teachers (with the aid of an advisory board). He should plan the season's work in general, outline the work of each playground, assign the teachers and see that they do the work expected of them. He should buy the supplies by wholesale, oversee the distribution and guard against careless loss. He should see that no money is wasted upon useless apparatus. He should settle all questions and disputes when necessary. He should visit each ground as often as possible, suggesting any changes or new ideas that seem to be needed. He should see that the instructors report on time. He should see that supplies and repairs are quickly attended to. He should study the local conditions of each ground and guide the work accordingly. He should plan the season's work in a progressive manner with the final exhibition as a culmination of what has been accomplished. The events of this final gala day he should carefully plan ahead, giving each ground a perfectly fair chance, and have each assistant understand perfectly what is expected.

3. The men and women workers should bear a closer and more friendly relationship in their work than has

been the custom previously. A man should be at the head of each ground; this man should be responsible to the Superintendent for the work on his particular ground.

4. Requisition blanks should be given to all instructors. When in need of supplies they should fill out a blank and hand to the Superintendent who should file it after filling the order. Thus a check may be made upon the use of apparatus.

5. All balls, bats, mitts and other stealable apparatus should be of a special design, or be stamped with the hot iron stamp.

Much loss of this small equipment might be eliminated if the instructors were provided with suitable methods to prevent it. Give each boy or girl a pin with a number, at the same time taking the address. Give out supplies only to those with numbers, taking a pin for each piece given out, and putting the pin in the box from which the ball or bat are taken. If the ball or bat does not come back it can be traced by the pin.

6. Meetings of the Supervisors could be held in a way beneficial to all if a superintendent had charge and could bring up the various problems as he saw them, or as they were suggested to him. Then after hearing the different sides, settle the questions as seemed best, saying "we will do this or that," and being obeyed.

Then different educational subjects should be discussed, such as:

1. The fundamental principles of Play.
2. Necessity of leadership and aggressiveness in teachers.
3. What things are of most interest to boys on the playgrounds.
4. What things are of most interest to girls on the playgrounds.

5. How may the interest be varied to a greater extent.

6. A study of each playground as to why boys and girls are irregular in attendance. Whether it is lack of equipment, little variety of work, poor instruction or work at home.

7. The adoption of some such system as outlined would, if modified to meet the local conditions, put the movement upon a firm basis, and reap many results, such as:

1. A uniform system of salary.

2. Regulate the hours of work.

3. Save money by buying supplies by bids on wholesale.

4. Handle quickly supplies and repairs needed.

5. Less equipment used, better looked after.

6. Instructors would report for work on time.

7. Instructors would have the help of the superintendent in varying his work, or in settling any problem which might arise.

8. Instructors would keep busy while on duty.

9. Purchase of unnecessary apparatus avoided.

10. Better feeling between the grounds.

11. Each ground would be often visited by the superintendent.

12. Men and women instructors would get orders and supplies from one source.

REGARDING AIKEN STREET PLAYGROUND

1. The dust from teams passing across the field, smoke from fires on the dump and the filth and refuse all about are very unhealthful. Could not some other ground be secured. (The Textile School Ground for instance.)

2. It seems to be quite essential that a man who can speak French should be in charge of the playground in that district.

3. Intense heat, lack of shade, lack of a track were greatly felt last season.

4. The drinking fountain was not properly looked after by the city.

SUGGESTIONS OF E. J. SHULTE, SUPERVISOR.

The general scheme of the work last summer is to my mind almost ideal, especially the girls' department. The boys' work, I am inclined to think, could be improved upon, and any plan to develop this work along the industrial lines should be thoroughly considered.

Right here I would suggest that the manual training teacher of the Public Schools be consulted and if found practicable, a work-shop be built on each playground; an experienced teacher visit these shops at least twice a week during the summer for the purpose of giving instruction to the boys. A moderately deep wading pool should be constructed on the North Common, where the boys of that vicinity could be taught swimming during the summer, instead of having the boys risk their lives in the rivers and canals of the city. I think this can be done for less than \$300, and just think what this would mean to the some 1,500 children of that neighborhood.

The Giant Strides should be moved from the girls' part of the grounds and given entirely to the boys, as it is not desirable to have the girls swinging on these while the boys are near.

The boys should have some gymnastic apparatus in the form of horizontal and parallel bars, as these will develop a boy faster than any other form of exercise.

Have each supervisor submit, at least two weeks before the opening day, a list of materials that will be needed during the entire year. These lists should be placed in charge of the Head Supervisor who ought to have all the materials on the grounds, ready for the local supervisor to take charge of, not later than July 1st. Along with this material should be the registration cards and buttons.

The splendid police co-operation of last summer should be arranged for again, for although there was only one occasion where their assistance was necessary on the North Common last summer, their presence alone insured the boys protection while they played.

The Saturday morning conferences are a splendid thing, as they offer an opportunity for the exchange of ideas, formulating of plans, and tend to make all work together toward one end.

STATISTICAL REPORT

NORTH COMMON BOYS

SEASON 1911

Attendance for Month

	A. M.	P. M.	TOTAL
July	3,465	4,975	8,440
August	3,780	6,520	10,300
Season	7,245	11,495	18,740

Average Attendance

July	195	280	475
August	189	326	515
Season Average	192	303	495

Attendance in Base Ball

July	1,410	2,545	3,955
August	1,870	3,360	5,230
Season	3,280	5,905	9,185

Average attendance in Base Ball

July	85	150	235
August	103	187	290
Season Average	94	168	262

Number of Games Played

	Scrub Games	League Games	Games with other Commons	Total
July	145	120	6	271
August	138	58	10	206
Season	283	178	16	477

ATTENDANCE.

	JULY	AUGUST	TOTAL
Äthletics	245	690	935
Quoits and Ring Toss	130	530	660
Basket Ball	310	330	640
Volley Ball	560	285	845
Mass Drill	10	293	303
Lawn Croquet	205	190	395
Croup Games	215	98	313
Knife Game	145		145
Box Ball	70	35	105
Swimming	145		145
Taught to Swim	11		11
Cricket		75	75
First Aid		48	48
At Moving Pictures	50		50
Story Telling	28		28

Spectators at Various Games and Events.

	July	August	
(About	600	2,850	3,450

- 5 Boys' Base Ball Leagues.
- 2 Horse Shoe Tournaments.
- 4 Squads of First Aid to the Injured.
- 12 Boys in Kite Flying Contest.
- 55 Boys at North Common Picnic.
- 3 Boys in Industrial Work.

REPORT OF THE PLAYGROUND COMMITTEE OF THE MIDDLESEX WOMEN'S CLUB.

The grateful appreciation of hundreds of children who frequented the playgrounds of our city during the summer of 1910, and of their mothers, was so marked, that the playground committee of the Middlesex Women's Club felt encouraged to continue its efforts in 1911. This feeling was strengthened by the request which came to us from the Park Commission that we carry on our work along the same lines as last year. One great difficulty presented itself when this request came, lack of funds. Before it was possible to make any plans, money must be obtained. Several ideas for raising the necessary sum were advanced by different members of the committee, but as so many extra demands had been made upon the charitable public during the winter, all seem inexpedient.

It was finally decided by the committee that the chairman be empowered to interview members of the Board of Aldermen and of the Common Council to see whether an extra appropriation of \$800 could be obtained, this sum to be used for the girls' work. The playground appropriation at the beginning of the year was sufficient only for the boys' work and for one supervisor for the girls. The City Council was approached, the appropriation secured, and the money expended under the direction of the Park Commission. The money raised by the committee at the Darrach Recitals was used for the carrying on of the industrial work, and for the installing of hot water in the basement of the Eliot School—perhaps the most important work done by us during the summer, as the baths were made use of by hundreds of girls, who last year found the shock of the cold water too severe.

One of our greatest difficulties was to secure suitable supervisors and assistants, especially as the pay, in many cases, was altogether too small a sum for the physical strength, nervous energy and general fitness of the teacher required.

Greatly to our regret Miss Anna Moran, owing to the serious illness of her father, was unable to take up the work. It was deemed inadvisable to have any head supervisor of the girls' work this year, but the supervisor of each ground was held responsible for her own work.

Miss Mildred Dunn, who did such successful work on the Aiken Street ground in 1910, was chosen supervisor of the South Common. To her untiring energy and ability much of the success of this year's work is due. Miss Dunn had charge of the girls' baths, arranged for substitutes, had charge of the supply rooms, gave help to instructors in industrial work, and was unceasing in her efforts to make the work successful, as well as to make exhibition day one of interest and profit. With Miss Dunn at the South Common were Miss Faith Doty, Miss Adelaide Noyes, and Miss Mabel Haggerty, a force altogether inadequate for the large numbers attending there.

Miss Mabel Dockendorff, in charge, with Miss Bertha Puffer and Miss Grace McAllister, as assistants, were at the North Common. As last year, this ground was one where some of our best work was done.

At the Aiken Street ground, Miss Nellie Warner, with Miss Regina Frappier and Miss Mary Carolan, did splendid work. As in 1910, the College Club took this ground under its especial patronage, and did everything possible to make it a model playground. To the College Club we are also indebted for the services of trained

nurses who visited the playgrounds at regular times to give advice and help when needed. To this club we are also indebted for a donation of \$185, \$150 of which was for the baths, \$29 for the materials for industrial work, and \$6 for playground buttons.

Miss Eugenia Frappier was at the Paige Street ground. Though small and undesirable in location, this little breathing-place was greatly appreciated by the children in the vicinity, and became so popular that an extra assistant was necessary.

Instead of being stationed at the Fayette Street ground this year, Miss Ella Prescott was given charge of the new one opened at the Pond Street School. This was an ideal place, but the nearness of the surrounding houses made it, at times, pretty uncomfortable for the residents. Most of them bore the noise and inconvenience very good-naturedly, realizing how much was being done for the children.

So great was the demand for a playground in West Centralville that the Park Commission decided to open one at the Greenhalge School, and this was given in charge of Miss Katherine Tobin. So popular was it, and so rapidly did its members increase, that to take care of the boys it became necessary to take one of the men from the other grounds. Even then, Miss Tobin had a serious problem on her hands as to what to do with so many girls. Fortunately some volunteer assistants were found to help her. Of these, Miss Mary Tobin and Mrs. H. W. Jewett gave for some weeks untiring and continuous service. Miss Helen Hurd was employed as a regular assistant to Miss Tobin for the latter half of the season.

A most successful exhibition of the different kinds of work done on the playgrounds was held at the close of

the season in one of the large windows of Dows' drug store. We are very grateful to Mr. Dows for this privilege, as the location is central and many who otherwise would have known nothing of this feature became interested in what we are doing. So varied in character, practical in nature and skillful in execution were most of the articles exhibited that the praise of those who saw them was unstinted. Another year, it is to be hoped more ample quarters may be secured, as hundreds of children were exceedingly disappointed, many being moved to tears, because there was no room for even one article made by them.

On the South Common, August thirtieth, a Play Festival was given, which was participated in by children from the six playgrounds. That the public was interested in this event was evinced by the numbers who gathered on the grounds to watch the children. As an exhibition of organized play, athletic games and folk dancing, it was most successful, and in one respect especially so, namely: the large numbers of different children who took part. The grand calisthenic drill was a proof of the excellent control under which the children have been. About a thousand children from the six different playgrounds took part in this without even a general rehearsal. Those who saw the marching into position from the four corners of the grounds, and the precision of movement in the exercise, will long remember the pleasing sight.

On behalf of the children, the committee wishes to express its gratitude to the many interested friends who have helped to make possible the happiness and uplift of so many children of our city, numbers of whom have thus received their first outlook into a larger and happier life than the one they have known. Especially do we thank

the members of the School Board for the use of school rooms, grounds, and janitor services; to physicians and nurses for their services; to volunteer assistants; to merchants who have given materials, and discounts on goods purchased; to Mr. Fred Horne and to Mr. E. A. Wilson for a ton of coal each; to contributors of money, emergency boxes, and materials; to Miss Helen Cox, Miss Dorothy Mahoney and Miss Irene White for services as accompanists; and to all others who have in any way aided the work. The car rides and trips into the country were greatly appreciated by the children. For these, thanks are due the Bay State Street Railway Company.

FINANCIAL REPORT.

On hand January 1, 1911.....	\$ 14 06
Receipts from Darrach Recitals	454 00
Donation, Sam Walter Foss Literary Association	10 00
" Unitarian S. S.....	15 00
" Mrs. J. H. Boardman.....	1 00
" Miss Alice T. Owens	1 00
Received from College Club	185 00
" from sale of playgrounds buttons.....	23 77
	<hr/>
	\$703 83

PAID OUT.

Marshall Darrach, (per agreement)....	\$196 75
Advertising and printing placards.....	21 00
Baths, janitor service and matron.....	276 91
Materials for industrial work... ..	78 92
Playground buttons	28 50
Piano and music for Exhibition Day.....	12 00
Transportation for Exhibition Day.....	13 00
Assistants (extra).....	39 00
	<hr/>
Total	\$666 08
On hand December 20, 1911	37 75
	<hr/>
	\$703 83

In conclusion the chairman of the committee wishes to state that this report, necessarily limited in extent, has merely stated a few facts in the details of the work. The good accomplished speaks for itself. The mistakes and weaknesses of the methods employed are realized and deplored, but it must be remembered that the problem is a big one. Each city has its own peculiar conditions, and each must solve its own problems. The work here has now grown so large that we suggest the forming of a Playground Association with a responsible head to take charge of, and to carry on the work in accordance with tested and approved methods of administration.

Respectfully submitted,

ELIZABETH C. KENNEDY,

Chairman.

SUGGESTIONS OF HAROLD A. BRUCE, SUPERVISOR.

On July 2nd a conference with the teachers and principals was held preparatory to the opening of the playground. The South Common playground was officially opened July 6th. The playgrounds were opened from 9.00 a. m. to 5 p. m. daily, except Saturday. The closing date was August 30th.

The South Common Playground was open thirty-nine days. The approximate total number of visits made to the grounds was twenty thousand two hundred and eighty children. The average daily attendance was approximately five hundred and twenty. This sum was secured as follows: The children on the playground were counted mornings and afternoons. Children coming in the morning and afternoon were not counted twice, but the largest individual session of the day was taken adding twenty per cent to this in order to get a day's attendance. Our census sheets show a total number enrolled of two hundred and fifty-three boys who bought the pin, the emblem of the Lowell Playground League. Looking at the ages of the children we find the following percentages:

Five years.....	6 per cent
Six years.....	7 " "
Seven years	8 " "
Eight years	11 " "
Nine years	11 " "
Ten years	16 " "
Eleven years	12 " "
Twelve years.....	13 " "
Thirteen years	9 " "
Fourteen years	4 " "
Over fourteen years	3 " "
	<hr/>
	100 " "

An interesting item on our census sheets refers especially to the nationality of our Playground visitors, as follows :

French.....	25 per cent
Irish.....	16 “ “
Canadians.....	15 “ “
Americans.....	14 “ “
Italians	12 “ “
Russians.....	7 “ “
Hebrews.....	4 “ “
Germans.....	4 “ “
Negroes.....	2 “ “
Armenians	1 “ “
	<hr/> 100 “ “

I would like to call attention to the wonderful work from a social standpoint accomplished by playgrounds in massing Americans of the great heterogeneous population in our cities.

The following organized play was graded according to age, Seniors, Intermediates, Juniors, Junior Intermediates, and Midgets. The age limits being from three to fifteen years.

PLAY	{	NON-COMPETITIVE	{	EXPERIMENTAL—Long Walks, Observation and Nature Study																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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The above mentioned classification of play was divided. The morning exercises constituting the non-competitive and the afternoon exercises embracing the competitive.

In summing up the popular athletic sports among the boys it will be interesting to note the sports that appealed to the majority.

COMPETITIVE PLAY.

1. Baseball.
2. Track and Field Athletics.
3. Cricket.
4. Relay Racing.
5. Swimming.
6. Basketball.
7. Volley Ball.
8. Association Football.
9. Throwing for Distance.
10. Soccer Football.

Although swimming is ranked fifth, it probably ranks with baseball during the summer months, but as there were only two expeditions a week on swimming trips the data above is given with that in view.

Competitive games are vastly more popular than the non-competitive games. The average boy has a decided liking for physical competition. I think that sometimes the boys are more apt to place too much stress upon the winning of a game or race, regardless of the consequences, physically speaking.

Competition at once makes the play vastly more strenuous and conditions are introduced calling for rule and continuous application of moral principle. Class distinction between competitive and non-competitive plays is always clear in practice and should be so in theory.

Probably the greatest fault to be found in last summer's work was the all-prevailing sentiment among our visitors of prize winning. This idea of personal gain was constantly emphasizing itself in every phase of the organized play.

In regard to race feeling close observation demonstrated a friendly and democratic spirit among all classes.

I desire to commend the Lowell Police Department for their excellent patrolling of the South Common during the Playground season.

Weekly meetings of the Playground Supervisors were held on Saturday mornings in the rooms of the Women's Club of Lowell. Matters pertaining to organization and administration were here discussed and in all instances the vote of the majority ruled. I cannot commend too highly this form of administration as it promoted social intercourse among the teachers and the exchange of ideas was found invaluable.

One local exhibition was held on the South Common, Thursday, August 17th, giving a demonstration of playground activity. It is estimated that two thousand people were in attendance at this exhibition. The third annual joint exhibition of the Lowell Playgrounds was conducted on the South Common, Wednesday, August 30th. The feature of this exhibition was a grand mass calisthenic exercise composed of the boys and girls of all the playgrounds in Lowell. It was roughly estimated that over fifteen hundred children actually participated in this drill. It was also approximately estimated that about ten thousand persons witnessed the final day's demonstration.

SUGGESTIONS FOR THE FUTURE SOUTH COMMON PLAYGROUND

- (1) Concrete the bottom of the frog pond.
- (2) Remove the urinal on the Playgrounds.
- (3) Provide sand pits for the Boys' Department and have them placed under the shade of trees.
- (4) The running track should be evened and rolled.
- (5) Plain wooden walls for hand ball courts should be erected.

LOWELL, MASS., December 31, 1911.

TO HIS HONOR THE MAYOR AND THE CITY COUNCIL OF THE
CITY OF LOWELL, MASS.

Gentlemen:

We have the honor to submit to you the report of
the expenditures of the Department of Parks of the
appropriation for Care of Trees.

Original appropriation	\$ 800 00
Additional appropriation.....	200 00
Total appropriation for Care of Trees.....	<u>\$1,000 00</u>
Expended for labor.....	\$668 57
Expended for material and supplies	331 43
	<u>\$1,000 00</u>

TO WHOM AND FOR WHAT MONEY WAS PAID OUT
DURING THE YEAR.

TO WHOM	FOR WHAT	AMOUNT
Adams Hardware & Paint Co.	rope, shovels, etc,	\$ 50 34
Bartlett & Dow	hoes, spades	30 65
John Wiley & Son	book	3 00
American Express Co.	express	55
John C. Bennett	hammers, chisels, etc.	55 50
Dumas & Co.	printing	17 29
The Thompson Hardware Co.	pruners, hammers, etc.	39 42
C. N. Rice	filing saws	23 45
Fred C. Church	insurance	50 00
C. B. Coburn Co.	rope, oil	14 98
E. P. Bryant	repairing fence	1 25
Park Department	horse hire	45 00
		<u>\$331 43</u>

LOWELL, MASS., December 31, 1911.

TO HIS HONOR THE MAYOR AND THE CITY COUNCIL OF THE
CITY OF LOWELL, MASS.

Gentlemen:

We have the honor to submit to you the report of
the expenditures of the Department of Parks of the
appropriation for Little Canada Playground Water Piping.

Appropriation.....		\$100 00
Expended for Labor.....	\$39 03	
Expended for material and supplies.....	60 85	99 88
Balance		<u>12</u>

TO WHOM AND FOR WHAT MONEY WAS PAID OUT
DURING THE YEAR.

TO WHOM	FOR WHAT	AMOUNT
George E. Hutchins,	hose and nozzle	\$ 7 30
Lowell Water Works Dept.	pipe and labor	92 58
		<u>\$99 88</u>

LOWELL, MASS., December 31, 1911.

TO HIS HONOR THE MAYOR AND THE CITY COUNCIL OF THE
CITY OF LOWELL, MASSACHUSETTS

Gentlemen:

We have the honor to submit to you a report of the
expenditures of the Department of Parks of the Approp-
riation for Repairing School Grounds.

Appropriation		\$500 00
Expended for labor.....	\$386 15	
Expended for material.....	113 85	500 00
Balance.....		<u>000 00</u>

TO WHOM AND FOR WHAT MONEY WAS PAID OUT
DURING THE YEAR

TO WHOM	FOR WHAT	AMOUNT
John Brady	team hire	\$ 10 00
Middlesex Auto Co.	auto express	5 00
Bartlett & Dow	grass seed	4 00
Robin Hill Nursery	shrubs	33 40
The Staples Brothers	labor and material for gran- olithic walks and gutters	56 00
Fred Jenness	sod	5 45
Total		<u>\$113 85</u>

LOWELL, MASS., December 31, 1911.

TO HIS HONOR THE MAYOR AND THE CITY COUNCIL OF THE
CITY OF LOWELL, MASSACHUSETTS.

Gentlemen:

We have the honor to submit to you a report of the expenditures of the Department of Parks of the Appropriation for Playgrounds.

Original Appropriation.....		\$1,500 00
Additional Appropriations.....		800 00
Total Appropriation for Playgrounds.....		<u>\$2,300 00</u>
Expended for labor and supervision.....	\$1,994 14	
Expended for material and supplies	305 86	<u>2,300 00</u>
Balance.....		0,000 00

TO WHOM AND FOR WHAT MONEY WAS PAID OUT
DURING THE YEAR.

TO WHOM	FOR WHAT	AMOUNT
James Whittet,	lumber, latches. etc.	\$ 42 36
Narragansett Machine Co.	castings	1 50

TO WHOM	FOR WHAT	AMOUNT
Sylvester Bean	asphaltum and turpentine	6 78
C. B. Coburn Co.	asphaltum, brush, lime	2 71
H. C. Girard Co.	padlock	25
Adams Express Co.	express	1 31
Bartlett & Dow	bolts, screws, etc.	10 96
Boston & Maine R. R. Co.	freight	23 40
Edward Cawley	cement	3 27
Everwear Mfg. Co.	ladder handles	16 80
C. N. Rice	padlock keys	2 15
The H. R. Barker Mfg. Co.	rail tee	13
E. A. Wilson & Co.	cement	2 08
George M. Foster	bean sacks	80
Boutwell Bros., Inc.	chain and hooks	12 37
Bentley & Edwards Mfg. Co.	repairs	1 50
Beggs & Cobb Tanning Co.	tan bark	32 50
Amasa Pratt Co.	lumber	1 34
Pratt & Forrest Co.	lumber	1 02
W. P. Brazer & Co.	bats, balls, nets, etc.	126 68
Engineering Dept.	taking pictures	2 56
E. F. Hathaway	cards	1 50
The Robertson Co.	use of chairs	3 50
Union Printing Co.	cards and envelopes	1 50
Charles A. Whittet	stamps	1 00
P. O'Hearn	sand	5 20
The Thompson Hardware Co.	bolts and screws	69
Total		<u>\$305 86</u>

LOWELL, MASS., December 31, 1911.

TO HIS HONOR THE MAYOR AND THE CITY COUNCIL OF THE
CITY OF LOWELL.

Gentlemen:

We have the honor to submit to you the report of the expenditures of the Department of Parks of the appropriation for Lucy Larcom Park.

Appropriation		\$1,000 00
Expended for labor.....	\$307 78	
Expended for material and supplies.....	484 29	792 07
Balance for Lucy Larcom Park.....		<u>\$207 93</u>

TO WHOM AND FOR WHAT MONEY WAS PAID OUT
DURING THE YEAR

TO WHOM	FOR WHAT	AMOUNT
Boston & Maine R. R. Co.	freight	\$ 1 50
Electrical Railway Equipment Co.	lighting poles	92 50
Bay State Nurseries	shrubs	157 20
N. Y., N. H. & Hartford R. R. Co.	freight	13 42
The Thompson Hardware Co.	flower bed guard	12 09
Charles A. Whittet	railway expenses	3 00
The H. R. Barker Mfg. Co.	repairs	3 70
Engineering Department	services	8 04
A. Whittet	plants	16 73
The Lowell Electric Light Corp.	light	169 61
Morse & Beals	bulbs	6 50
Total		<u>\$484 29</u>

LOWELL, MASS., December 31, 1911.

TO HIS HONOR THE MAYOR AND THE CITY COUNCIL OF THE
CITY OF LOWELL, MASS.

Gentlemen :

We have the honor to submit to you a report of the expenditures of the Department of Parks of the appropriation for Shedd Playground.

Balance of 1910 appropriation.....	\$ 6,239 66
Appropriation for 1911.....	<u>10,000 00</u>
Total appropriation.....	\$16,239 66
Expended for labor.....	\$9,310 24
Expended for material and supplies.....	<u>4,841 58</u>
Balance	<u>\$2,087 84</u>

TO WHOM AND FOR WHAT MONEY WAS PAID OUT
DURING THE YEAR.

TO WHOM	FOR WHAT	AMOUNT
Pratt & Forrest Co.	lumber	\$ 31 51
Lowell Water Works	pipe, labor and hose	68 96
John C. Bennett	snow shovels	6 50
Bartlett & Dow	wicks, padlock, etc.	8 95
Middlesex Registry of Deeds	registering plan	6 00
George A. Nelson	pictures	7 00
Ernest W. Bowditch	engineering	228 45
John Brady	team hire	1,315 12
Engineering Department	engineering	1 06
E. P. Bryant	team hire, sharpening tools	976 26
Edward Cawley	team hire	865 63
Matthias F. Connor	team hire	439 37
John P. Quinn	team hire	151 25
James Whittet	nails, lumber, labor	3 04
Boston & Maine R. R. Co.	freight	2 23
The Conners Bros.	team hire	37 50
Wilder & Wotton	team hire	5 00
Daniel T. Sullivan	cement	51 47
Coffin Valve Co.	sewer gate and hydrants	160 85
New Eng. Tel. & Tel. Co.	telephone service	2 70
N. Y., N. H. & Hartford R. R. Co.	freight	7 07
Charles A. Whittet	railway expenses	1 35
Fred Houdlette & Sons, Inc.	water pipe	152 97
Middlesex Machine Co.	pipe and tee	237 38
New England Nurseries, Inc.	shrubs	9 20
Robin Hill Nursery	tree	2 00
E. F. Hathaway	signs	4 50
C. B. Coburn Co.	oil	4 51
W. A. Mack Co.	pails and covers	2 10
Amasa Pratt Co.	stakes	20 16
Middlesex Auto Co.	auto hire	5 00
C. H. Hanson & Co., Inc.	teaming	3 00
Sewer Department	castings	49
Howard L. Foster	teaming	20 00
Daniel Gage	ice	3 00
Total		<hr/> \$4,841 58

SIXTY-SEVENTH ANNUAL REPORT

OF THE

LOWELL CITY LIBRARY

TWENTY-SECOND REPORT

OF THE

LIBRARY TRUSTEES

OF THE CITY OF LOWELL
MASSACHUSETTS



FOR THE YEAR NINETEEN HUNDRED ELEVEN

BUCKLAND PRINTING CO.



72 - 74 MIDDLE STREET

Administration of the Library, 1911

Board of Trustees

HON. JOHN F. MEEHAN, MAYOR, *Ex-officio*

ROWENA PALMER	Term expires 1912
HENRY H. HARRIS	" " 1913
JOHN T. DONEHUE, D. D. S.	" " 1914
EDWARD J. WELCH, M. D.	" " 1915
HUGH J. MOLLOY	" " 1916

Organization

HON. JOHN F. MEEHAN, Chairman

ROWENA PALMER, Vice-Chairman

HENRY H. HARRIS, Clerk

Librarian

FREDERICK A. CHASE

Assist. Librarian

ALICE M. MYERS

Assistants

HARRIET F. HILL	ALICE H. KIDDER	HARRIET M. SULLIVAN
ALICE L. DONEHUE	CLARA BEARD	DOROTHY P. WEBSTER
THOMAS BAXTER	JOHN ANDREWS	

Bindery

WALTER H. GILMAN	HARRY C. BOWEN	JOHN MANNING
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Superintendent of Reading Room

STEPHEN T. WYMAN

Librarian of Children's Room

BERTHA J. KYLE

THOMAS WALSH

Thomas Walsh, Vice-President of the Trustees, died June 25th, 1911.

At a meeting of the Trustees held June 26th, the following minute was adopted.

RESOLVED: That as one of the members, Thomas Walsh, has died after nearly twenty years of active and valuable service, we, the Trustees of the City Library of Lowell, deem it fitting that this tribute to his memory be placed upon the minutes.

He was one of the original Trustees of the Library appointed by Mayor Palmer in 1888, when the Library became incorporated, and, with the exception of three years has served continuously since that time. He was dean of the Board and vice-chairman. Remembering his early efforts in the gaining of knowledge that would be helpful to him and acknowledging his indebtedness to the books which at that time were obtained only after much effort, he brought to his duties of Trustee the firm belief that the basis of efficiency is knowledge and that this knowledge should be supplied freely through the public library.

While taking a broad view of the functions of the library in furnishing instruction, information and enjoyment, he was particularly interested in efforts to help the workers in our factories to be worth more to themselves and more to their employers. It is to his credit that the development of the industrial and useful arts department is largely due.

He was wise in counsel, conservative and economical in administration and at the same time held progressive views of the far reaching influence of the library in our civic progress. The library has lost one of its warmest friends and one who had a most conscientious interest in its welfare.

The Trustees gratefully put upon record their appreciation of his long, faithful and efficient service.

HON. CHARLES E. HOWE

Hon. Charles E. Howe, died July 23rd, 1911. At a meeting of the Trustees held July 24th, the following minute was placed upon the records.

Charles E. Howe served as a member of this Board two years as Mayor of the City of Lowell and *ex-officio* Trustee of the Library and nearly three years as Trustee by appointment.

He was keenly interested in the welfare of the Library and showed a firm confidence in its present serviceableness and in the prospects of its future development. He gave freely of his time and the Library has benefited by his wide knowledge of men and affairs.

By his death this Board loses a valuable and genial associate and the Library a warm friend and liberal-minded supporter.

Report of the Trustees for 1911

To the Honorable, the City Council of Lowell:

Gentlemen: The Trustees of the City Library herewith present their annual report for the year 1911.

FINANCIAL STATEMENT

Receipts

Balance from previous year.....	\$	70	17
Appropriation by City Council.....		15,500	00
Interest on Deposit.....		85	47
Fines and other receipts.....		536	91
		—————	\$16,192 55

Expenditures

Salaries	10,323	49
Lighting	950	33
Binding	1,033	40
Books	1,524	19
Periodicals	784	67
Sundries—Printing.....	523	29
Water Tax.....	18	00
Express, etc	59	67
Supplies	240	10
Postage	62	11
Miscellaneous.....	157	51
Lighting Plant....	159	02
Power	73	60
Repairs, etc	223	67
Delivery Station..	55	81
	1,572	78
Cash on hand		3 69
	—————	\$16,192 55

JOHN DAVIS FUND**Income for 1911**

Cash on hand at last report.....	\$ 546 72	
Interest and dividend earnings on investments and loan.....	4,325 77	
From re-payment of loan to General Library Fund.....	1,900 00	
Liquidation dividend No. 11 National Bank of Republic.....	24 00	
Refund of taxes on National Bank shares	84 11	
Cash received from Am. Tel. & Tel. rights	63 90	
Cash received from City Inst. for Savings	1,416 88	
Cash received from payment on principal sum of mortgage note	25 00	
	<hr/>	\$8,386 38

Expenditures

For temporary loan to General Library Fund in anticipation of annual appropriation of City Council.....	1,900 00	
Expenses of Children's Room.....	702 33	
Expenses of Sunday Opening.....	389 97	
Books purchased for the Library.....	3,270 92	
Contribution towards purchase of David Neal's "Rialto"	188 25	
Furnishings for Children's Room.....	83 00	
Deposit in Central Savings Bank on account 35075 for Sinking Fund.....	100 00	
Cash on hand January 1, 1912.....	1,751 91	
	<hr/>	\$8,386 38

ADMINISTRATION

The year has been one of great changes in the personnel of the directorate of the Library. During that time two of the members of the board of trustees have died. Mr. Walsh whose death occurred in June was succeeded by Edward J. Welch, M. D. J. T. Donehue, D. D. S., was appointed to succeed Hon. Charles E. Howe, whose death occurred in July.

The only changes in the library staff have been the resignation of Miss Rachel Flint to accept a position in Manchester, N. H. Miss Florence B. Shaw was appointed to fill the vacance caused by Miss Flint's resignation. Miss Shaw resigned in the latter part of December and her place was filled by Miss Alice Donehue. Miss Blanche Gray was engaged at the same time for evening work in three evenings of each week.

INCREASED USE OF THE LIBRARY

The circulation of books for the year shows an increase of nearly 14,000. This increase directly reflects the greater liberality of the City in giving the library a little larger appropriation. The library was enabled to replace worn out books and to furnish more copies of popular fiction. The amount of the circulation is to a great degree dependent upon the ability of the library to furnish enough copies of the popular books.

CENTRALVILLE STATION

In October the Trustees decided to open a delivery station at the store of Wells Brothers in Centralville. The station was opened Nov. 27th, and at once became popular.

From the opening to the end of the year 2,690 books were circulated. Some eight hundred books have been required to supply the demands of this station and the main library has found it difficult to keep it supplied with sufficient books. The success of this one attempt at an expansion of the library's

field of work has shown the possibilities of greatly increasing the use of the library's books by this and similar distributing agencies. If funds are available for the purpose it is the library's desire to establish at least two more stations where they would seem to be most needed.

NOTABLE GIFTS

The library has been made more attractive by the hanging of four important pictures, three of which have been presented to it. An excellent copy of Stuart's portrait of Washington was presented by Dr. Wm. G. Ward. This was hung in the corridor leading to Memorial Hall and above the stairway. A large photograph of the Forum in Rome was presented to the library by her executors in compliance with the request of the late Mrs. Frank F. Battles. Through the efforts of Mr. Walter Coburn of this city the library has come into the possession of an oil painting "The Rialto" by David Neal. The painting is one which the artist considered one of his most important works. An added value is given to the painting by the fact that the artist was born in Lowell. The city should be glad to own an important work of one of its most distinguished sons. The painting was valued at \$1,200 by the artist, who gave \$200 towards its purchase by making the price \$1,000, of this latter sum \$500 was contributed by Mr. Ogden Mills of New York City leaving still \$500 to be contributed before the painting could be purchased. Through Mr. Coburn's efforts \$311 75 of this sum was given by generous citizens of our city and by popular subscriptions. The balance \$188.25 necessary to complete the purchase of the painting was contributed by vote of the Trustees from the John Davis Fund.

Besides these gifts to the library an important addition to the library's collection was made when it was decided to hang the fine portrait of Ex-Governor Greenhalge by Mrs. Frederick A. Wood in the library. This painting is the property of the city and formerly hung at City Hall but was transferred to the library at the request of Mrs. Greenhalge so that it might be seen by more people.

EXHIBITIONS

Hiawatha	Amesbury	Mythology
Wells Cathedral	Historic Virginia	Medici family
Walter Crane No. 1	Unger No. 1	Italian Architecture
Audubon	Walter Crane No. 2	Nutting pictures
Animals picnic	Mythological pictures	

ANNOUNCEMENTS

Library and Reading Rooms open from 9 a. m. to 9 p. m., except on legal holidays.

Reading Rooms open Sundays, 9 a. m. to 9 p. m.

Library open Sundays for reference use only, 2 to 9 p. m.

The regular meeting of the Trustees of the Library is held on the first Monday of each month, at 4.30 o'clock p. m.

CONTENTS OF THE LIBRARY, CLASSIFIED

Class of Books	No. Vols.
General Works.....	2,048
United States Government Publications.....	6,000
Magazines.....	11,124
Philosophy.....	1,370
Theology.....	4,117
Sociology.....	4,232
Philology.....	468
Science.....	3,284
Useful Arts.....	3,128
Fine Arts.....	3,821
General Literature.....	8,822
Biography.....	6,585
History, Description and Travel.....	12,536
Genealogy and Heraldry.....	442
Fiction.....	15,439
Standard Library.....	1,100
Total.....	\$84,516

CHILDREN'S ROOM

The registered attendance in the Children's Room during 1911 was 63,194, which means that the daily average has been about two hundred;—boys and girls ranging from three to eighteen years or over.

The appearance of the room was rendered still more attractive, in the summer, by the addition of four window boxes containing ferns and geranium plants; and a charging desk, later, contributed to the same end.

A telephone, to connect with the Main Department of the library, and a "buzzer," have, with the desk, proved most useful adjuncts.

25,378 books were circulated. The largest daily average for any one month being 126, in November.

It is noticeable that there has been less occasion to retain cards on account of careless handling of books; that more reference work has been done in the room, and more reading by the children, generally; especially by several groups of formerly restless boys, some of whom have secured cards.

A number of teachers have manifested great interest in introducing their pupils to the Children's Room, and in encouraging them to have cards, and to read.

Several testimonials have come to the Children's Librarian from teachers, parents, and children as to the benefits derived from systematic reading; one little girl's saying: "*I began the Reading Courses, to gain information, because I thought I ought to; but now I am keeping on with the reading because I love to!*"

The collection of books now numbers 3,775, of which 118 are picture books, for library use, only.

A number of reference books have been added, including a children's cyclopædia of twenty-four volumes.

BERTHA J. KYLE,
Children's Librarian.

CONDITION OF THE LIBRARY

Volumes purchased during the year.....	3,521
Volumes added by gift.....	137
Volumes added by binding periodicals.....	301
Worn-out books replaced.....	656
Duplicates purchased.....	650
Total number of volumes added.....	2,653
Total number of volumes in the Library.....	84,516
Periodicals and papers subscribed for.....	227
Periodicals and papers given.....	16
Number of volumes used, home and reference.....	141,929
Number of volume consulted in the Reference Room.	11,059
Number of postcards sent to delinquents during year	3,741
Library open, days	298
Total circulation.....	141,929
Average daily circulation.....	476
Largest monthly circulation (December).....	15,726
Smallest monthly circulation (July).....	8,631
Largest daily circulation (December 2)	931
Smallest daily circulation (July 11)	153
Percentage of fiction read.....	70.1
Percentage of other classes.....	29.9

New Registration With Three Year Limit, April 1, 1910

Applicants received during the year.....	3,269
Applicants who did not call for cards.....	68
Number of names registered Dec. 31, 1910	7,056
Number of names registered Dec. 31, 1911.....	10,257
Total registered during the year.....	3,201
(New.....2,278 Renewed.....923)	

LIST OF NEWSPAPERS AND PERIODICALS CURRENTLY RECEIVED

ABBREVIATIONS: D—DAILY; M—MONTHLY; Q—QUARTERLY;
W—WEEKLY; *—GIFT

- | | |
|---|---|
| <p>America, w.
American Academy of Political and
Social Science. Annals.
American Architect, International
Ed, w.
American Art, Annual.
American Carpentry and Building, M.
American Boy, M.
American Catholic Quarterly Review.
American City, M.
American Cultivator, w.
American Engineer and Railroad
Journal, w.
American Homes and Gardens, M.
American Journal of Psychology, Q.
American Journal of Science, M.
American Machinist, w.</p> <p>Benziger's Magazine, M.
Blackwood's, M.
Bookman, M.
Bookman, English Ed., M.
Book Prices Current, American
Annual
Boston Advertiser, D.
Boston Commercial Bulletin, w.
Boston Cooking School Magazine.
Boston Globe, D.
Boston Herald, D.</p> <p>Cabinet Maker, M.
Canal Record, *w.
Catholic World, M.
Century Magazine, M.
Chambers's Journal, M.
Chautauquan, M.</p> | <p>American Magazine, M.
American Monthly.
American Primary Teacher, M.
American Shoemaking, w.
Annual Literary Index.
Architecture. (L').
Architects and Builders' Magazine, M.
Architectural Record, M.
Architectural Review, M.
Army and Navy Journal, w.
Art de la Mode, M.
Art et Decoration, w.
Art Journal, M.
Athena.
Athenaeum, w.
Atlantic Monthly.</p> <p>Boston Journal, D.
Boston Medical and Surgical
Journal, w.
Boston Pilot, w.
Boston Post, D.
Boston Record, D.
Boston Transcript, D.
Boston Traveller, D.
Brick Builder, M.
Building Age, w.
Bulletin of Bibliography, *Q.</p> <p>Churchman, w.
Collier's Weekly.
Concrete, *M.
Congregationalist, w.
Contemporary Review, M.
Correspondent (Le), SEMI-M.</p> |
|---|---|

- Chemical News, w.
Christian Endeavor World, w.
Christian Register, w.
Christian Science Journal. *M,
Christian Science Monitor, D.
Christian Work and Evangelist.

Delineator
Dyer and Calico Printer, M.

• Eastern and Western Review, *
Education, M.
Educational Review, M.
Edinburgh Review, Q.
Electrical Review, w.
Electrical World, w.

Fall River News, D.
Fibre and Fabric, w.
Figaro, w.

Garden Magazine, M.
Gazette des Beaux-Arts
Good Housekeeping, M.

Hampton's Magazine, M.
Harper's Bazar, w.
Harper's Magazine, M.
Harper's Weekly
Harvard Alumni Bulletin

Illustrated London News, w.
Illustration (L')
Independent, w.
Industrial Engineering
Industrial Review and Textile Re-
porter, M.

Johns Hopkins University Studies, M.
Journal of Education, w.
Journal of Educational Psychology
Journal of Franklin Institute, M.

Keith's Magazine of Home Build-
ing, M.

Cotton, M.
Courrier des Etats-Unis, w.
Country Life in America, M.
Cosmopolitan Magazine, M.
Current Literature, M.
Craftsman, M.

Dial, SEMI-M.

Electrician and Mechanic, M.
Engineering and Mining Journal, w.
Engineering News, w.
Engineering Record, w.
Everybody's Magazine, M.

Forest and Stream, w.
Fortnightly Review, M.
Forum, M.
Freeman's Journal (Dublin), D.

Graphic, w.
Grand Rapids Furniture Record

Home Decorator
Horseless Age, w.
House and Garden, M.
House Beautiful, M.

Inland Printer, M.
International Journal of Ethics, Q.
International Studio, M.
Inter-Ocean, w.

Journal of the Knights of Labor, M.
Journal of the Society of Chemical
Industry, M.
Journal of Society of Dyers and
Colorists, M.

Kindergarten Magazine, M.
Knowledge, M.

- Ladies' Home Journal, M.
 Lawrence Eagle, D.
 Leslie's Weekly
 Lewiston Weekly Journal
 Library Journal, M.
 Life, w.
 Lippincott's Magazine, M.
 Literary Digest, w.
 Little Folks, M.

 Machinery, M.
 McClure's Magazine, M.
 Manchester Union, D.
 Manufacturer's Record, w.
 Massachusetts Magazine
 Masters in Art
 Metal Worker, w.

 Nation, w.
 National Builder, M.
 National Geographic Magazine, M.
 Nature, w.
 New Bedford Evening Standard
 N. E. Historical and Genealogical
 Register, Q.
 New England Homestead, M.
 New England Magazine, M.

 Our Dumb Animals, M.
 Outing, M.

 Pan American Bulletin
 Park and Cemetery, M.
 Patent Office Gazette, * w.
 Philosophical Review, w.
 Photo-Era, M.
 Popular Astronomy, M.
 Popular Electricity, M.
 Popular Mechanics, M.
 Popular Science Monthly, M.

 Quarterly Review

 Reader's Guide to Periodical Literature
 Recreation, M.

 Living Age, w.
 Living Church, w.
 London Lancet, M.
 London Times, w.
 London Truth, w.
 Lowell Courier-Citizen, D. (m. & eve)
 Lowell Etoile (L')
 Lowell Sun, D.
 Lowell Sunday Telegram

 Mind, Q.
 Mineral Industry
 Modern Electrics, M.
 Monde Illustré, (Le) w.
 Montpelier Argus, w.
 Munsey's Magazine, M.
 Musical Courier, w.

 New York Clipper, w.
 New York Herald, D.
 New York Sun, D.
 New York Tribune, D.
 New York World, TRI-W.
 New York Evening Call, D.
 Nineteenth Century, M.
 North American Review, SEMI-M.
 Notes and Queries, w.

 Outlook, w.

 Posselt's Textile Journal, M.
 Power, w.
 Practical Engineer, M.
 Printing Art, M.
 Providence Journal, D.
 Public Libraries, M.
 Publisher's Weekly
 Punch, w.

 Queen, w.

 Review of Reviews, M.
 Revue des Deux Mondes, SEMI-M.
 Revue Illustrée, BI-MENSUELLE

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|------------------------------------|----------------------------|
| St. Nicholas, M. | Sports of the Times, W. |
| San Francisco Chronicle, W. | Springfield Republican, D. |
| Science, W. | Statesman's Year Book |
| Scientific American, W. | Suburban Life, M. |
| Scientific Am. Supplement, W. | Success, M. |
| Scribner's Magazine, M. | Survey, W. |
| Society for Psychical Research, M. | System |
| Spectator, W. | |
| Technical World, M | Textile World Record, M |
| Textile American | Toronto Globe, W. |
| Textile Colorist, M. | Tribune Almanac |
| Textile Manufacturer, M. | Two States, * |
| Textile Manufacturer's Journal | |
| Vogue, W. | |
| Westminster Review, M | World Almanac, ANNUAL |
| Whitaker's Almanac, ANNUAL | World's Work, M. |
| Wilson's Photographic Magazine, M. | Writer, M. |
| Work with Boys, M. | |
| Youth's Companion, W. | Zion's Herald, W. |

List of Donors, 1911

	Vols.	Pamphlets
Adams, Charles F.....		1
Adams, J. Witham.....	1	
Aetna Life Insurance Co.....	1	
Atlas Portland Cement Co.....	2	
American Asso. for International Conciliation..	1	
American Humane Educational Society.....	3	
Baker, Walter & Co.....		1
Chase, Frederick A.....	6	
Colburn, H. D., Sec.....		6
Dartmouth College.....	1	
Davis, John, Estate of.....	3	
Des Moines, Iowa, City of.....	1	
Dixon, Joseph, Crucible Co.	1	
Doubleday, Page & Co.....		1
Hale, Bishop, Bequest.....	1	
Hallowood, John F.....	1	
Harriman, Mrs. E. H.....	7	
Harvard University..	1	1
Hope, Arthur L.....		15
Lawrence, Edwin Durning.....	1	
London Board of Trade.....	1	
Lowell Board of Trade	1	
Lowell, City of	1	
Massachusetts Grand Army of the Republic...	1	
Massachusetts Society Sons of the American Revolution	1	
Massachusetts State Library	280	
Massachusetts, State of.....	43	
Massachusetts Total Abstinence Society.....	1	
Mitchell, E. F.....	1	

	Vols.	Pamphlets
New York State Museum	4	1
Parker, Moses G., M. D.	7	
Pennypacker, Hon. S. W.	1	
Porter, Robert P.	1	
Porto Rico, Government.		1
Princeton University	1	
Raymond, G. L.	1	
Reed, Thomas B., Memorial Association.	1	
Review of Reviews Publishing Co.	1	
Robbins, Raymond C.	1	
Rollinger, Mary H.	1	
Royal Society of Canada.	1	
Russell Sage Foundation	12	
Schoenhof Foreign Book Co.	1	
Sherwin-Williams Co.	1	
Spaulding, Henry G.		1
Spence, Mrs. Anita W.	1	
Thayer, Wildie	1	
Theodossion, C. H.	4	
Thompson, Slason.	1	
Ticonderoga Pulp & Paper Co.	1	
Tucke, Edward M.	28	1
Tyrrell, A. G.	1	
United States Brewers' Association.	1	
United States, Supt. of Documents.	1	
Wolfe & McKenzie	1	
Woodbury, C. J. H.		1
	<hr/> 423	<hr/> 39

Lawrence, Grace

Two early certificates of memberships.

Pettingill, Mrs. E. C.

Two early maps.

Auditor's Report of the John Davis Fund

LOWELL, MASS., Jan. 8, 1912.

*To the Trustees of the City Library
of Lowell, Massachusetts,*

Gentlemen :

Complying with your request, I have examined the securities comprising the "John Davis Fund," together with the accounts relative thereto, for the year ending December 30, 1911, and respectfully submit the following report :

The invested assets consisting of bonds, stock certificates, savings bank deposit books and mortgage notes, together with personal property in shape of silverware and jewelry, were produced for examination by the custodians, Messrs. Andrew G. Stiles, City Treasurer, and Frederick A. Chase, Librarian, and found correct as required by the records and last audit.

The account of Receipts and Payments were carefully checked, and the Payments properly accounted for by vouchers, or copies of the votes of the Trustees authorizing transfers to the General Fund or Appropriation.

Authority for changes of, and additional investments was shown in copies or votes of the Trustees.

Appended is an account of the Receipts and Payments for the year, and a list of the securities comprising the Fund, with their present market value, as obtained from reliable sources.

Respectfully submitted,

FRANK P. MCGILLY,

Auditor.

RECEIPTS

Cash on hand at last audit.....	\$ 414 76
From re-payment of loan to General Library Fund.....	1900 00
Interest and dividend earnings on investments and loans.....	4346 89
Cash received from City Institution for Savings, account No. 4522	769 88
Cash received from City Institution for Savings, account No. 72189	647 00
Cash received from 41 rights B. & M. (Common).....	115 85
Cash received from 12 rights A. T. & T. Co.....	63 90
Dividends Nos. 10 and 11 in liquidation of National Bank of Republic.....	64 00
Payment on principal of mortgage note.....	25 00

\$8347 28**PAYMENTS**

For temporary loan to General Library Fund in anticipation of annual appropriation of City Council.....	1900 00
Purchase of books... ..	3835 09
Expenses of Children's Room	740 33
Expenses of Sunday Opening.....	421 93
Furniture for Children's Room.....	83 00
Contribution towards purchase of David Neal's "Rialto".....	188 25
Deposit in Central Savings Bank on account No. 35,073 for Sinking Fund.....	100 00
Auditing	25 00
Cash on hand December 29, 1911	1053 68

\$8347 28**LIST OF SECURITIES****Registered Bonds**

NAME	Due	Rate of Interest	Par Value		Present Value
City of Boston	1919	3½%	\$10,000.00	@ 97½	\$ 9,750.00
Boston & Maine R. R.	1944	4½%	11,000 00	@ 103¾	11,412.50
Boston & Maine R. R.	1926	4%	10,000.00	@ 96	9,600.00
Boston & Maine R. R.	1929	4½%	5,000.00	@ 102½	5,125.00
N. Y., N. H. & H. R. R.	1954	4%	10,000.00	@ 100	10,000.00
N. Y., N. H. & H. R. R.	1914	4%	10,000.00	@ 99¾	9,975 00
Illinois Central R. R.	1952	3½%	10,000 00	@ 86¾	8,675 00
Boston & Albany R. R.	1952	3½%	4,000 00	@ 92½	3,685.00
<hr/>					
\$70,000.00					<hr/> \$68,222.50

Railroad Stock

No. Shares	NAME OF ROAD	Price per Share	Amount
41	Boston & Maine (Common	\$100.00	\$ 4,100.00
39	Boston & Albany	220.00	8,580 00
1	Nashua & Lowell	245.00	245.00
1	Concord & Montreal (4th Class)	158.00	158.00
			<hr/> \$13,083.00

Manufacturing Stocks

No. Shares	NAME OF COMPANY	Price per Share	Amount
50	Merrimack (Common)	\$ 40.00	\$ 2,000.00
3	Lowell Bleachery	210.00	630.00
4	Middlesex	70.00	280.00
49	Bigelow Carpet	165 00	8,085.00
			\$10,995.00

Miscellaneous Stocks

12	American Tel. & Tel. Co.	\$ 138.00	\$ 1,656.00
3	Lowell Gas Light Co.	300.00	900.00
			\$2,556.00

Bank Stocks

No. Shares	BANK	Per Share	Amount
6	Nat. Bank of Commerce, Boston	\$175.00	\$ 1,050.00
9	Appleton Nat. Bank, Lowell	105.00	945.00
3	Old Lowell Nat. Bank, Lowell	105.00	315.00
2	Wamesit Nat. Bank, Lowell	100.00	200.00
11	Union Nat. Bank, Lowell	180.00	1,980.00
10	First Nat. Bank of West Newton	140.00	1,400.00
			\$5,890.00

Savings Bank Book

BANK	Book No.	Amount
Central Savings Bank	35,073	\$674 86

Mortgage Notes

M. & P. J. M.	\$ 75 00
A. H.	2,000.00
M. M. & D. W. R.	650.00
\$2,725.00	

Summary of Investments and Cash Assets

Name of Investment	Valuation Dec. 19, 1910	Valuation Dec. 29, 1911	Increase	Decrease
Registered Bonds	\$67,920.00	\$68,222.50	\$302.50	
Railroad Stocks	14 257.00	13,083.00		\$ 1,174.00
Manufacturing Stocks	12,409 00	10,995.00		1,414.00
Miscellaneous Stocks	2,589 00	2,556.00		33.00
Bank Stocks	5 862.00	5,890 00	28 00	
Savings Bank Book	1,939.76	674.86		1,264.90
Mortgage Notes	2,750.00	2,725.00		25.00
Cash in Bank	414.76	1,053.68	638.92	
Silverware and Jewelry	90.15	90.15		
	\$108,231.67	\$105,290.19	Net Increase	\$2,941.48

ANNUAL REPORT
OF THE
CITY SOLICITOR



FOR THE YEAR 1911

LOWELL, MASS.
BAKER PRINTING COMPANY
1912

REPORT

OFFICE OF CITY SOLICITOR LOWELL, MASS.

January 1st, 1912.

TO THE MUNICIPAL COUNCIL OF THE CITY OF LOWELL,

GENTLEMEN :

I herewith submit the Annual Report of the Law Department for the year 1911.

LITIGATION

8911. *Charles Cowley v. City of Lowell*

This was an action of tort or contract brought by the plaintiff in the Superior Court to recover damages by reason of alleged negligence of the defendant in permitting the Proprietors of the Locks and Canals along Merrimack River to establish their water system of pipes to intersect with the water pipes of said city, said water pipes of said city being constructed and maintained for the distribution of pure water for the use of said city and its inhabitants for extinguishing fires creating steam and for drinking and other purposes ; and for

suffering the water in said Proprietors' system of water pipes to run through certain water gates and check valves into said city's water pipes. The plaintiff alleges that on July 19, 1903, a large quantity of coal stored in one of the buildings of the Merrimack Manufacturing Company of Lowell took fire and it and the building were destroyed; that the Proprietors aforesaid, the Merrimack Manufacturing Company and the Lawrence Manufacturing Company availing themselves of their system of water pipes intersecting with said city's system of water pipes took from said city's reservoir half a million gallons of water for use in extinguishing said fire, greatly depleting the quantity in said city's reservoir and water pipes and that said Proprietors aforesaid, and the said Merrimack Manufacturing Company and the said Lawrence Manufacturing Company undertook without objection from said city to replenish the quantity of water in their reservoir with water pumped from the Merrimack River near the mouth of said city's sewer on Aiken Street, but therein failed because certain check valves were so imperfectly constructed as to be unfit for the use and failed to perform the function which they should have performed, and one of said check valves opened and remained open for many hours and thereby half a million gallons of Merrimack River water, more or less, entered said city's water pipes and commingled with the pure water therein and polluted and poisoned the same. The plaintiff further alleges that in consequence of his drinking of said mixture of said Merrimack River and drain water he suffered sickness and for a long time pain of body and mind.

The writ was dated July 1st, 1905, and returnable to the Superior Court the first Monday of August, 1905.

Walter Adams, Esq., who was first appointed as auditor resigned, and Franklin T. Hammond, Esq., was appointed in his place.

In February 1908, the plaintiff died and his sister Miss Eliza Cowley, who was appointed as executrix, was admitted as plaintiff to prosecute the action.

The case was tried together with a similar action brought against the Proprietors of the Locks and Canals on Merrimack River.

Many hearings and conferences were held at great length. The evidence was concluded in 1908 and arguments were made in May 1909. In 1911 the Auditor Franklin T. Hammond, Esq. rendered the following decision.

"I have carefully considered all the evidence on the question and I am unable to find that the plaintiff has sustained the burden of proving that any water escaped through the check-valve at Bridge and Canal Streets from the mains of the Proprietors' into those of the city, and I find that such was not the case. In view of this finding it becomes unnecessary to deal with the other issues in this case. "

19089. *Marie Louise Labranche v. City of Lowell.*

This was an action of tort brought by the plaintiff to recover the sum of \$40,000, for alleged injuries received on Race Street, December 3, 1910. The writ was dated January 4, 1911, and returnable to the Superior Court the first Monday of February, 1911.

The case was settled for \$75.00, without costs.

60083. *Elmer A. Stevens, Treasurer and Receiver General v. City of Lowell.*

This was an action of contract brought by the plaintiff to recover the sum of \$4,286.92 for board and tuition of Kate Roberts and others. The writ was dated December 22, 1910, and returnable to the Superior Court for Suffolk the first Monday of February, 1910. The city paid the full amount of the claims and it was agreed by counsel that the following

entry might be made. "Judgement for plaintiff and judgement satisfied."

20129. *City of Lowell v. Lizzie Fitzgerald, otherwise called Elizabeth Fitzgerald.*

This is an action of contract brought in the Superior Court to recover the sum of \$742.93 for expenses paid the town of Weymouth for the support of the defendant and her minor children. The writ is dated July 8, 1911, and returnable the first Monday of September, 1911. Pending.

882. *United States Circuit Court. (Equity)*
Hassam Paving Company v. City of Lowell.

This is a bill of complaint brought in U.S. Circuit Court, Boston, against the city of Lowell, praying that a writ of injunction may issue to restrain it from infringing upon letters patent, Nos. 819, 652, 861, 650 and 651.

The writ is dated Aug. 7, 1911, and returnable to the U. S. Circuit Court, Boston, the first Tuesday of September, 1911. Pending.

19087. *Joseph G. Wright v. City of Lowell.*

This is a petition to the Superior Court for a jury to assess damages alleged to have been caused to the plaintiff by reason of the alteration of the grade crossing at School Street. The writ is dated July 15, 1911, and returnable the first Monday of September, 1911. Pending.

20033. *Hugh J. Brogan v. City of Lowell.*

This is a petition to the Superior Court for a jury to assess damages alleged to have been caused to the plaintiff by reason of the alteration of the grade crossing at School Street. The petition was filed in the Superior Court August 22, 1911, and returnable the first Monday of October, 1911. Pending.

20176. *Edward Cawley v. City of Lowell.*

This is an action of tort brought by the plaintiff to recover the sum of \$15,000 because of alleged negligence of the city in permitting large quantities of sewage and other filthy matter to be emptied into Trull's Brook causing great pollution and overflow of its natural banks, and large quantities of sewage and other filthy matter were deposited upon the land of the plaintiff lying adjacent to said brook.

The writ is dated August 9, 1911, and returnable the first Monday of October, 1911. Pending.

20027. *Aaron J. Harris v. City of Lowell.*

This is a petition to the Superior Court for a jury to assess damages alleged to have been caused to the plaintiff by reason of the alteration of the grade crossing on School Street.

The petition was filed in the Superior Court August 7, 1911, and returnable the first Monday of October, 1911. Pending.

19813. *Milo D. Clay v. City of Lowell.*

This was a petition to the Superior Court for a jury to assess damages alleged to have been caused to the plaintiff by reason of the alteration of the grade crossing at School Street. The writ was dated July 26, 1911, and returnable the first Monday of September, 1911.

The case was settled without trial in Court and it was agreed that the entry might be made, "Judgement for the Petitioner in the sum of \$248.00 without costs, and Judgement Satisfied."

19829. *Melancthon M. Allen v. City of Lowell.*

This is a petition to the Superior Court for a jury to assess damages for land taken by the city of Lowell on the northerly side of Pawtucket Boulevard for the purpose of improving and increasing its water supply.

The writ is dated August 4, 1911, and returnable the first Monday of September, 1911. Pending.

Thomas H. Elliot v. City of Lowell.

This is a petition for a jury to assess damages for land taken by the city of Lowell for school purposes at corner of Lincoln and Main Streets.

The writ is dated October 27th, 1911, and returnable to the Superior Court the first Monday of December, 1911 Pending.

19808. *Eva M. Wright and Joseph G. Wright v. City of Lowell.*

This is a petition to the Superior Court for a jury to as-

sess damages alleged to have been caused to the plaintiffs by reason of the alteration of the grade crossing at School Street.

The writ is dated July 15, 1911, and returnable the first Monday of September 1911. Pending.

19541. *Robert G. Bartlett v. City of Lowell.*

This is a petition to the Superior Court for a jury to assess damages alleged to have been caused to the plaintiff by reason of the alteration of the grade crossing at Plain Street and Boston Road. Pending.

19911. *Harry P. Graves, Admr. of the Estate of Andrew S. Peterson v. City of Lowell.*

This is an action of tort brought to recover the sum of \$10,000, for the death of Andrew S. Peterson by falling over an embankment or abutment on Lincoln Street which it is alleged was negligently left unguarded by the city of Lowell in the progress of changing the grade in Lincoln Street, December 17, 1910.

The writ is dated July 1st, 1911, and returnable to the Superior Court the first Monday of August, 1911. Pending.

18866. *John H. Davis et al v. City of Lowell.*

This was a petition to the Superior Court for a jury to assess damages sustained by the petitioner by the building of a high embankment in front of their premises, in pursuance of a decree of the commissioners appointed by the court

on the petition for the abolition of the grade crossing at Plain Street and Boston Road. The Petition was filed with the Superior Court December 21, 1910, and returnable the first Monday of February, 1911. Trial was had at the April sitting of the Superior Court which resulted in a verdict for the petitioner in the sum of \$2343.93 with costs amounting to \$48.23, which was paid by the city.

Catherine Guyette v. City of Lowell.

This is an action of tort brought in the Police Court of Lowell for damages to plaintiff's buildings on Aiken Avenue, and household articles contained therein because of alleged negligence of the city while constructing a sewer in Aiken Avenue in June, July and August, 1911.

The writ is dated October 31, 1911, and returnable the first Saturday of December, 1911.

19415. *Curtis McEwan v. City of Lowell.*

This is a petition to the Superior Court for a jury to assess damages alleged to have been caused by change of grade crossing on Lincoln Street. The writ is dated April 8, 1911, and returnable the first Monday of June, 1911. Pending.

19001. *Charles Lajoie v. City of Lowell.*

This was a petition to the Superior Court for a jury to assess damages alleged to have been caused by change of grade crossing on Lincoln Street. The writ was dated January 4, 1911, and returnable the first Monday of February,

1911. Trial was had at the October sitting of the Superior Court and verdicts by the jury were as follows :—

Charles Lajoie v. City of Lowell	\$866.40
Same v. N.Y.N.H. & H.R.R.	108.30
Same v. Old Colony Railroad, verdict for the defendant, by Order of Court.	

Edwin E. McCausland v. City of Lowell.

This is a petition to the Superior Court for a jury to assess damages alleged to have been caused to the plaintiff by reason of the alteration of grade crossing at School Street.

The writ is dated Dec. 28, 1911, and returnable the first Monday of February, 1912. Pending.

Helen E. Esterbrook v. City of Lowell.

This was an action of tort to recover the sum of \$5000, brought in the Superior Court by Helen E. Esterbrook, a minor, under the age of twenty-one years, plaintiff, who brings this action by her mother and next friend, Minnie M. Esterbrook.

The writ was dated the first Monday of March, 1911.

An investigation showed that the defect complained of existed and the liability reasonably certain. The injuries were quite severe. Being satisfied that the best interests of the city would be promoted thereby I settled this case by agreement for judgement for the plaintiff for the sum of \$400, without costs, and judgement satisfied.

18237. *Dennis E. Conners v. City of Lowell.*

18238. *Joseph Walsh v. City of Lowell.*

18239. *Edward F. Conners v. City of Lowell.*

These several actions were brought to recover under the statutes certain sums of money paid to city treasurer for tax titles which were alleged to be defective by reason of omissions and informalities in the assessment and sale of the land. The writs were dated June 15, 1910 and returnable to the Superior Court the first Monday of August, 1910. The cases were argued on agreed statement of fact at the September sitting of the Superior Court, 1910. The court found for the plaintiffs in twenty-four items of their declaration and for the defendant on twenty-three.

Both the plaintiff and the defendant appealed from the court's findings to the Supreme Judicial Court. The cases were submitted to the full court in January.

On May 19th, 1911, the full bench handed down its decision on which judgement was entered as follows:—

“ Judgement for Dennis E. Conners in the sum of \$182.04, damages and costs; Judgement for Edward F. Conners in the sum of \$121.29, damages and costs; Judgement for Joseph Walsh in the sum of \$121.38, damages and costs.”

Eleven questions of law were decided; six in favor of the plaintiffs and five in favor of the defendant city.

In the following cases no changes have been made since my last report.

16707. *Alden B. Illsley v. City of Lowell.*

19073. *Winifred Radigan v. City of Lowell.*

18451. *Patrick S. Smith, et al v. City of Lowell.*

19207. *George H. Brown v. City of Lowell.*

19209. *Catharine Goulet v. City of Lowell.*
19208. *Hercule Goulet v. City of Lowell.*
18236. *John H. Handley v. City of Lowell.*
19512 *Guiseppe Capone v. City of Lowell.*
3032. *Bragg Manufacturing Co. (U. S. Ct.) v. City of Lowell.*
274. *Peter Curran v. City of Lowell.*
869. *Bernard Delaney, et al v. City of Lowell.*
1151. *Patrick O'Hearn v. City of Lowell.*
922. *James Smith, et al v. City of Lowell.*
1957. } *Grade Crossings, (1910) Equity.*
1992 }

LIST OF OPINIONS SINCE FEBRUARY 28, 1911.

-
- 1911
March 7. Board of Aldermen.
Relating to election of City Clerk, and Treasurer and collector of Taxes, by calling joint convention.
-

- “ 9. Board of Police.
Defining the word “ Premises ” as used in Chapter 476, Acts of 1910.

- March 17. Board of Aldermen.
Relating to contract for labor and supplies for department of public buildings by Inspector of Buildings, with a member of municipal board.
-

- “ 21. As to whether city of Lowell is entitled to any return from Boston & Northern St. Ry. for privilege of carrying freight.
-

- April 12. Lands and Buildings Committee.
Right of school department to install drinking fountains in school houses of the city.
-

- “ 18. John C. Farrington, (school committee).
Right of school committee to confirm a teacher nominated by the principal of the State Normal School.
-

- May 11. Andrew S. Barrett, Alderman.
Relative to examination of treasurer's accounts by expert assistants employed by the auditor.
-

- “ 25. Board of Police.
Relating to licenses of first and fourth class.

- May 25. Board of Police.
Power of licensing board to rescind vote granting liquor licenses.
-

- “ 31. Board of Aldermen.
Powers and duties of appropriation committee.
-

- June 2. Committee on Streets.
Maintenance of bridge over Merrimack Canal at Market Street crossing.
-

- “ 6. Board of Aldermen.
Relating to legality of appointment of board of engineers of fire department.
-

- “ 16. Committee on Military Affairs.
Use of parks or commons for drill grounds by local military companies.
-

- “ 16. John J. Mullaney.
Duties of licensing board in regard to investigation of case of illegal selling, where there has been an acquittal of said charge by police court.

- June 19. Board of Police.
Relating to transfers of licenses to adjoining premises of original location, and question of closing old entrance.
-
- “ 22. Joseph H. Jodoin, Jr., Alderman.
Powers and duties of fire department committee.
-
- “ 30. Board of Aldermen.
Right of city to build and rent conduits for underground wires.
-
- “ 30. Board of Police.
Granting of first and fourth class licenses on same premises.
-
- Aug. 18. Board of Police.
Right of victualling licensee to establish roof garden in premises.
-
- Sept. 6. Committee on Sewers.
Obligation of Locks & Canals to remedy conditions along Merrimack River.

Sept. 12. Fred'k A. Chase, Librarian.
Application of Eight Hour Law to employees
of City Library.

" 26. Board of Police.
Propriety of Board of Police to bring charges of
assault against proprietor of hotel before trial
and determination of said charge by a court of
justice.

" 26. John F. Meehan, Mayor.
Relative to contract for American Car Sprinkler
Company.

Oct. 3. Board of Aldermen.
Apportionments of expense for construction of
sidewalks.

" 14. F. A. Bates, Board of Health.
Right of City to take land for Sanitary Stations.

Dec. 2. Board of Police.
Closing of licensed places on day of Municipal
Preliminary election.

LEGISLATION.

During the year 1911, I appeared at the hearings before the various committees at the State House in support of or opposition to the following bills :

March 1, 1911, before Committee on Liquor Laws, on bill repealing the "Bar and Bottle" law.

March 7, 1911, before Committee on Cities, in favor of the Bill relative to opening for public travel of ways in the City of Lowell.

March 14, 1911, before Committee on Public Health, in opposition to Bill relative to pollution of Merrimack River.

March 21, 1911, before Committee on Taxation, in opposition to Bill to permit Commonwealth to retain all taxes of public service corporations.

April 5, 1911, before Committee on Roads and Bridges, in favor of Bill providing for maintenance by the county of bridges over Merrimack River at Lowell.

Respectfully submitted,

WILLIAM W. DUNCAN,

City Solicitor.

ANNUAL REPORT
OF THE
BUILDINGS DEPARTMENT
OF
LOWELL, MASSACHUSETTS
FOR THE YEAR
1911



LOWELL, MASS.
COURIER-CITIZEN COMPANY
67 MIDDLE STREET
1912

REPORT

1911

OFFICE OF INSPECTOR OF BUILDINGS
CITY HALL, LOWELL, MASS.,

*To the Commissioner of Public Property and Licenses
and members of the Municipal Council of the City
of Lowell, Massachusetts:*

GENTLEMEN:

In accordance with the requirements of the building ordinance, I have the honor to submit to you the following, as my report of the Buildings Department for the year ending December 31, 1911.

Respectfully submitted,

JAMES DOW,

Inspector of Buildings.

ORGANIZATION

Inspector of Buildings

JAMES DOW

Deputy Inspector and Foreman	Albert E. Burnham
Clerk of Department	Joseph F. Roarke

Inspector of Gas Piping

Robert J. Wotton

Janitors

Memorial Hall
James McCarthy

Police Station
Omer Smith
Michael Bruin

Rifle Range
Frank Burns

Boss Painter

Frank Legare

EXPENDITURES IN DETAIL

REGULAR APPROPRIATIONS

BUILDINGS—OFFICE SALARIES AND WAGES

Appropriation		\$12,945 25
Appropriation, (additional)		932 05
Receipts		519 44
Expended as follows		
Inspector of Buildings	\$ 1,800 00	
Deputy Inspector of Buildings	1,248 00	
Clerk of Department	1,248 00	
Gas Piping Inspector	971 60	
Janitors, Police Station	1,784 00	
Janitor, Memorial Hall	729 00	
Mechanics and Laborers'	6,616 14	
	\$14,396 74	\$14,396 74

BUILDINGS—OTHER EXPENSES

Appropriation		\$ 7,100 00
Appropriation (additional)		1,495 50
Receipts		573 17
Expended as follows		
Supplies		
Coffin fixtures, cloth, etc.	\$ 31 78	
Hardware	389 20	
Lumber	1,532 46	
Mason supplies, coal, etc.	77 67	
Paints, oils, glass, etc.	508 89	
Piper's supplies	156 01	
Stationery, printing, etc.	196 35	
Transportation tickets	40 50	
Water	20 70	
	\$ 2,953 56	\$ 9,168 67
Amounts carried forward,	\$ 2,923 56	\$ 9,168 67

Amounts brought forward,		\$ 2,923 56	\$ 9,168 67
Repairs and maintenance			
Advertising.....	\$ 16 50		
Belting	7 68		
Board of horses	1,170 75		
Concrete	249 94		
Electrical rep.	170 85		
Electric power	219 98		
Express and freight.....	5 41		
Horse shoeing	196 30		
Hardware and machinery repairs	169 77		
Heating repairs	1,450 69		
Mason work	50 98		
Metal work	94 00		
Plumbing, piping, etc.	1,752 86		
Renting chairs	15 60		
Roofing repairs	234 17		
Teaming	10 00		
Typewriter repairs	4 90		
Telephone	12 35		
Wagon and harness repairs	235 95		
Weather strips	19 30		
	<hr/>	\$ 6,215 11	
		<hr/>	<hr/>
		\$ 9,168 67	\$ 9,168 67

RIFLE RANGE

WAGES

Appropriation		\$ 624 00
Expended as follows		
Keeper at range.....	\$ 624 00	
	<hr/>	<hr/>
	\$ 624 00	\$ 624 00

OTHER EXPENSES

Appropriation		\$ 300 00
Appropriation (Special)		1,400 00
Expended as follows		
Advertising.....	\$ 6 30	
Coal and mason supplies	34 60	
Electrical repairs	2 75	
Hardware	1 86	
Labor on pit, walls, etc.	327 68	
Long range practice and transportation	394 07	
Mason work (contract)	517 60	
Paint	1 00	
Rent of land.....	25 00	
Target paper	29 92	
Target pasters	63 75	
Teaming	61 25	
Telephone	40 20	
Wood choppers	62 54	
	<hr/>	
	\$ 1,568 52	
Balance carried to 1912	131 48	
	<hr/>	<hr/>
	\$ 1,700 00	\$ 1,700 00

SCHOOL HOUSES

WAGES

Appropriation	\$10,000 00
Appropriation (additional)	353 52
Receipts	2,652 24

Expended as follows

Mechanics and laborers as per pay rolls	\$13,005 76	
	<hr/>	<hr/>
	\$13,005 76	\$13,005 76

OTHER EXPENSES

Appropriation	\$ 9,000 00
Appropriation (additional)	2,274 05
Receipts	5,571 42

Expended as follows (Supplies)

Blackboard	\$ 21 76	
Burlap, cloth, etc.	30 15	
Grates	90 00	
Hardware	452 61	
Lumber	1,034 26	
Mason supplies	260 31	
Paint, oils, glass, etc.	2,453 33	
Piper's supplies	592 97	
School furniture	388 50	
	<hr/>	<hr/>
	\$ 5,323 89	\$16,845 47

Amounts carried forward,	\$ 5,323 89	\$16,845 47
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Amounts brought forward,		\$ 5,323 89	\$16,845 47
Repairs and maintenance			
Awnings and curtains	\$ 6 00		
Belting repairs	19 64		
Board of horse	25 00		
Concrete	565 66		
Electrical repairs	128 18		
Freight	5 15		
Filling	20 80		
Hardware, fire tools, machinery repairs	32 73		
Heating and ventilation repairs .	2,809 23		
Hanging shafting	467 39		
Mason work	822 37		
Papering	22 23		
Plumbing, piping, etc.	4,757 13		
Raising building	25 00		
Roofing repairs	1,304 27		
Sewer maintenance app. labor on sewer.	160 32		
Teaming	135 23		
Weather strips	215 25		
	<hr/>	\$11,521 58	
		<hr/>	<hr/>
		\$16,845 47	\$16,845 47

SPECIAL APPROPRIATIONS

CITY HALL—WATER HEATER

Appropriation		\$ 500 00
Carried over to 1912.....	\$ 500 00	
	\$ 500 00	\$ 500 00

CITY HOSPITAL REPAIRS

Appropriation		\$ 2,360 00
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Expended as follows

Advertising	\$ 12 60
Electrical repairs	66 88
Hay forks, troughs, etc.	174 27
Heating repairs	142 43
Lumber	330 48
Mason work	40 70
Miscellaneous stock	14 20
Oven repairs	7 75
Plumbing, piping, etc.	715 04
Roofing repairs	14 77
Labor per pay rolls	839 36

\$ 2,358 48

Transferred to general treasury ..

1 52

\$ 2,360 00 \$ 2,360 00

DROWNING APPARATUS

Appropriation		\$ 200 00
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Expended as follows

Boat	\$ 35 00
Buoys, grappling hooks, etc.	49 52
Hardware	7 40
Ladders	30 00
Labor per transfer bills	47 78
Rope and twine	9 95
Stock—lumber and hardware per transfer bills	20 32

\$ 199 97

Transferred to general treasury

03

\$ 200 00 \$ 200 00

FIRE HOUSES REPAIRS

Appropriation		\$ 2,250 00	
Expended as follows			
Hardware	\$ 21 64		
Heating and Plumbing	284 14		
Lumber	185 65		
Mason work	175 01		
Mason supplies	13 00		
Paint stock	40 53		
Labor—per pay rolls	921 48		
	\$ 1,641 45		
Balance carried over 1912	608 55		
	\$ 2,250 00	\$ 2,250 00	

REBUILDING RACE STREET FIRE HOUSE

Appropriation		\$20,000 00	
Expended as follows			
Advertising	\$ 34 20		
Architect	594 67		
Concrete	137 48		
Engineering	16 50		
Electrical supplies	143 75		
General Contract	13,158 40		
Lumber	12 41		
Teaming	2 50		
Labor—per pay rolls	67 02		
	\$14,166 93		
Balance carried over 1912	5,833 07		
	\$20,000 00	\$20,000 00	

SCHOOL HOUSES REPAIRS

Appropriation	\$ 2,800 00
Appropriation (additional)	4,165 00
Appropriation (additional)	800 00

Expended as follows

Advertising	\$ 15 75
Concreting	196 13
Fire escape (Contract)	715 00
Hardware	16 60
Heating	1,050 96
Kalsomining and plastering	1,704 90
Mason work, teaming and grading	891 78
Mason supplies	26 29
Old awnings	2 50
Plumbing	979 08
Sponges	4 50
Labor—per pay rolls	2,144 37

\$ 7,747 86

Balance transferred to general treasury

17 14

\$ 7,765 00 \$ 7,765 00

SUMMARY OF RECEIPTS AND EXPENDITURES

APPROPRIATION TITLE	Original Appropriation	Receipts By Transfer	Additional Appropriation	Total Appropriated	Total Expenditures	Balances
(Regular Appropriations)						
Buildings—Office Salaries and Wages	\$12,945 25	\$ 519 44	\$ 932 05	\$14,396 74	\$14,396 74	.....
Buildings Other Expenses	7,100 00	573 17	1,495 50	9,168 67	9,168 67	.....
Rifle Range Wages	624 00	.....	.....	624 00	624 00	.....
Rifle Range Other Expenses	300 00	.....	1,400 00*	1,700 00	1,568 52	131 48†
School Houses Wages	10,000 00	2,652 24	353 52	13,005 76	13,005 76	.....
School Houses Other Expenses	9,000 00	5,571 42	2,274 05	16,845 47	16,845 47	.....
(Special Appropriations)						
City Hall Water Heater	500 00	.....	.....	500 00	.....	500 00†
City Hospital Repairs	2,360 00	.....	.....	2,360 00	2,358 48	1 52**
Drowning Apparatus	200 00	.....	.....	200 00	199 97	03**
Fire Houses Repairs	2,250 00	.....	.....	2,250 00	1,641 45	608 55†
Rebuilding Race St. Fire House	20,000 00	.....	.....	20,000 00	14,166 93	5,833 07†
School Houses Repairs	2,800 00	.....	4,965 00*	7,765 00	7,747 86	17 14**
Totals	\$68,079 25	\$9,316 27	\$11,420 12	\$88,815 64	\$81,723 85	\$7,091 79

*Special appropriation for special work †Balances carried forward 1912 **Balances returned to Gen. Treas.

REPAIRS AND IMPROVEMENTS

The following is a general synopsis of the work done by the Building Department during the year 1911. It is practically impossible to give in detail the entire work done in the department during the year, but a general outline will in a way show the more important repairs and alterations made to our city buildings.

City Hospital—Rebuilt the coal pocket adjoining the railroad tracks. Repaired fences on both sides of the driveway to the main building and along the Chelmsford line, new fence on the roof of the boiler house, and new fence near the men's hospital.

Installed hay forks in two barns and separate drinking bowls in each stall in the cow barn, with running water to each bowl.

The children's cottage has received general repairing throughout, also the barn adjoining the cottage has been repaired and both buildings resingled and painted outside. New floors have been laid in the cottage, floors oiled, and the woodwork repainted. The roof of one piggery resingled, that of the henhouse patched, and new valleys on roof of the hothouse main building. The roof of the boiler house repaired, new clothes rigging erected.

New bath room on the third floor of women's hospital, three shower baths with Karbolith floors and large sink piped for hot and cold water installed in feeble minded ward. The plumbing and steam piping throughout institution has been extensively repaired, a Monarch steam blower has been set in brickwork of No. 2 boiler. The brickwork on both boilers has been repaired.

New sash in morgue windows covered with heavy wire screen. All new work painted, also bath rooms enameled, pipes bronzed, walls painted and ceiling kalsomined in the superintendent's dining room and front hall. The exterior woodwork of administration building repainted. Slate roofs repaired.

Board of Health—New board fences built on Cross Street and Broadway taking the place of the old billboards which were formerly there. Stalls in barn and shed have been repaired. General repairs.

City Hall—Built circular counter and high desk in main office of the Building Department and cut window opening in office of the Board of Health and put shelves in vault. Repaired the fire boxes of boilers, repaired windows, door checks, new hinges on vestibule doors, elevator, plumbing and steam piping. General repairs throughout building. Painted all new work.

City Stables—Repaired stalls in both barns, also all large outside doors. Built new fence on Fletcher Street to take place of old billboards. Roofing repairs. Sewer department building repaired and painted.

Police Station and Stable—New floors in main barn and repaired all stalls. Strengthened floor under the automobile, removed wagon track and built repair bench. Painted and varnished carriage and automobile room, electric lights and wiring extended. Painted, kalsomined and varnished the small court room and library, steam circulation in small court room. Retubed boiler and repaired the brickwork. Concreted driveway.

Rifle Range—Repaired barbed wire fences and built sixty feet of new fence. Resodded and graded mound in front of targets and built 10-inch concrete battlement above same to protect roof of target house or pit. Bank in rear of targets graded and sodded to prevent ricochet shots. A concrete barricade

has been built between the 300 and 500 yard ranges, and also a pit and concrete backstop for revolver range. Made twelve new target frames and telltales. Removed shelters at 500 and 600 yard ranges, also loose stones which might cause ricochets.

Engine 1 House—The stalls have been repaired, flooring relaid and front doors repaired. Varnished the engine room and stable, painted the ceilings and varnished the walls in sitting room and bath room.

Engine 2 House—Removed stall formerly used by Chief's horse and patched up floor. Repaired stalls, laid new floor in tower. New iron fence on west side of building from carriage house to street line.

Engine 3 House—Built a new closet in boiler room and repaired stalls. Built a pit under the Chief's auto and a closet for materials, whitewashed the basement. The Chief's office kalsomined, painted walls and waxed floors. On the steamer side of the house, including the toilets and sitting room, the ceilings and walls are painted and the woodwork varnished. Painted all the woodwork and iron work in both engine rooms and stable. Painted and varnished all woodwork where the auto is kept. On the truck side, varnished ceilings and painted walls and iron work, also painted and varnished the stable. Painted and varnished the hallways. General repairs incidental to above work.

Engine 4 House—Repaired bath room floor and sheathed where a new washbowl was put in. Repaired stall doors and fixed balustrade on top of building. Painted the outside, screens and fences. Plumbing and heating alterations and repairs.

Engine 5 House—Installed five new Lynn stall pans in stalls, sheathed up the side of stalls with hardwood matched flooring, patched flooring under the steamer. Painted the outside doors. Concreted 200 yards around building.

Engine 6 House—Repaired stalls, put in door at end of corridor to separate sleeping rooms from back hall. New slop sink, double, with trough and slop bowl. Piping repairs and general work.

Hose 7 House—Repaired stalls, put in letter plate in door. Varnished hose room, varnished and painted stable, blacked iron work and bronzed radiators.

This building has undergone an extensive alteration. The second story formerly was divided into sitting room, bath and dormitory; has been partitioned off into separate sleeping rooms, sitting room and bath, with all modern conveniences. New floors laid and rooms all fitted up with new finish, so that now it is one of the finest small houses in the city.

Hose 8 House—The old building has been torn down and a new and handsome house with all modern conveniences has replaced it and will be ready for occupancy early in January.

Hose 9 House—The stalls have been relaid, bulkhead covers repaired. Walls and ceilings painted and woodwork varnished in bath room.

Hose 10 House—Repaired stalls and doors and built new screen door, general repairs.

Hose 11 House—Installed six new Lynn stall-pans, built frame and sash for inside of bay windows. New closet in barn and recovered stalls with galvanized iron. Repaired all windows and doors. Removed brick wall in basement and whitewashed basement. Repaired carriage house and took out wooden floor, replacing same with concrete flooring and put in brick foundation. The stone wall around lot has been repaired and pointed. The sitting rooms, bath rooms, bed rooms, hallways, etc., have been painted and varnished. Varnished woodwork in the apparatus room on the truck side of the house, and painted and varnished both wagon room and stable on the hose side. Bronzed all steam pipes and radiators in the building. General repairs.

Hose 12 House—Built a new closet, repaired stalls and put in timbers under the large truck. Replaced two large urinals on the first floor with water closets. Steam circulation has been increased on second floor each side of building. Also-mined all walls and ceilings in the bed rooms, sitting rooms and halls, painted and enameled walls and ceilings of bath rooms, painted all steam and water pipes in basement. Whitewashed the basement.

Truck 2 House—Repaired stalls and put in a new cathead to replace old one that was rotten, repaired stall doors. New water heater and water piping for same. Whitewashed the basement.

Protective House—Roofing and general repairs.

Ames Street School—New sink on second floor. Repaired fences. Set two large radiators in the upper halls. Painted sinks. Retubed boiler.

Bartlett School (Old)—Extensive repairs have been made to this building for the use of the Industrial School. Partitions have been removed on the first and second floors, making two large rooms on each floor. Benches and platforms built and underlayers put in the basement to strengthen floors. The windows all repaired and reglazed. Old water closets removed and replaced by new ones, new sewer connection to street and two catch basins built in yard. New concrete in yard, fences repaired or rebuilt, new cellar window frames. Part of the building whitewashed, the yard graded. Extensive repairs to steam and extra circulation installed, also new sinks. The porches at main entrances taken down and the porches to basement rebuilt, roofing repaired. Small stone wall built on back line of lot to keep rain water from running into the next lot. Painting and general repairs. Shafting hung in machine rooms.

Bartlett School (New)—Painted motor room, machinery and sinks, also outside doors, iron work and screens. General repairs.

Butler School—Fences repaired. Woodwork in all rooms and corridors shellaced and varnished, steam pipes painted. Roofing repaired.

Central Street School—The yard has been graded and driveway paved. Four rooms of renovated furniture have replaced old furniture. New retaining wall, eighty-four feet long, built on east side of lot with new fence on top of same, also front fence repaired. Board walks replaced by concrete. Four new sinks. Painting and general repairs.

Colburn School (Grammar)—New steps on girls' side of building. Old furniture in four rooms replaced by renovated furniture. Fences repaired. The entire building kalsomined.

Colburn School (Primary)—Moved slate blackboards from assembly hall and placed them in the different schoolrooms behind teachers' desks. Refinished assembly hall and repaired walls where blackboards had been. Varnished basement and painted doors and fences. Rebuilt seventy-five feet of stone wall and fence on top of same.

Chapel Street School—Fences repaired, new steps in yard. Board walks replaced by concrete. One room of renovated furniture. General repairs.

Charles Street School—Repaired front fences, new door for basement. Old furniture in two rooms replaced by renovated furniture. Painting and general repairs.

Cottage Street School—Built a room for janitor, in basement. New sink on second floor. New cellar windows and four new outside doors. New ceilings in two rooms and rooms and corridors kalsomined. General repairs, painting, etc. Yard graded.

Edson School—Repaired fences, three new rooms of furniture. Cut door from corridor into teacher's room on second floor, shellaced and varnished teacher's room. Painted water closets and stairway.

Carter Street School—Painted outside doors and basement. New door checks for outer doors.

Franklin School—New retaining wall, one hundred eighty feet long, on Middlesex Street side of lot and new fence on top of same. Yard graded, painting and general repairs. Boiler retubed.

Favor Street School—New steel flue in chimney. General repairs.

Green School—The yard has been graded with crushed stone. Three rooms of renovated furniture set in place of old furniture. Boiler room whitewashed. New conductors from roof gutters. Two class rooms varnished and the iron work in boiler room painted.

Grand Street School—Two new sinks. General repairs and alterations, building painted outside. All rooms and corridors kalsomined, painted and varnished.

Greenhalge School—The fences have been repaired and painted. Two rooms of furniture placed in the assembly hall. Circulation in assembly hall has been increased, and all pipes bronzed. Iron gates and outer doors have been repainted. Weatherstripped twenty-four windows in assembly hall. Extensive heating repairs.

High School—The greater part of the furniture in the building has been repaired and refinished. This was quite an extensive job for the reason that the furniture was in very bad condition and the repairs required much time. The yard has been graded and paved, new catch basin built to carry off surface water, concrete top dressed and repaired. Basement walls, stairways, window stools and bands, screens and outer doors painted or varnished. Furnaces repaired.

High School Annex—Painted boiler room and screens, also outside gates and doors, refrosted windows in water closets. Brickwork of battlement taken down and relaid on front of building and the rear and sides repointed. The roofing and cornice repaired.

Howard Street School—New front doors. Urinal moved and partition taken down in basement to allow for light. Basement floor concreted, fences painted and general repairs.

Highland School—Three new sinks, urinal changed. New locks on front doors. The whole building has been repainted, varnished and shellaced. The walls of the teacher's room and master's toilet have been painted or kalsomined or papered. General repairs.

High Street School—Built one hundred feet of fence. New sink. Two new ceilings and rooms and corridors kalsomined and varnished.

Kirk Street School—Vestibule floor repaired and division fence taken down. Painting and general repairs.

Lyon Street School—Paved driveway and graded yard. New screens on cellar windows. In the annex building a new rear entrance has been built to the janitor's tenement above schoolroom.

Lexington Avenue School—Repaired fences and porches. New sink in basement. Repainted and varnished basement.

London Street School—Repaired fences and steps. Paved driveway in yard and also graded yard.

London Street School Annex—This building has received a general alteration; it has been repaired throughout. This building formerly set on posts which for some years have been gradually giving away, allowing the building to settle in places; besides this, the building was on leased land and only slight repairs were ever made to the structure. The building has now been leveled up and brick piers have been built to support same. New water closets have been put in and connected with sewer to take place of old out-house connected with dry well. Water service run to building and all connections made. A brick coal bin has been built under the stairs on the first floor. The

first story has been partitioned off and will be used as a substitute for a basement. The second story has been plastered, kalsomined and painted. The outside of the building has been repaired and painted.

Lakeview Avenue School—Boys' basement has been concreted. Board walks and fences repaired. General repairs.

Lincoln School—Painted basement, shellaced and varnished cellar stairway, painted iron work, porches and side doors, refrosted front basement windows. Repaired fences. Concreted basement floor. Registers in floor in unfinished attic. General repairs.

Moody School (New)—Steps made for basement. New sink. New furniture placed in the various rooms. Painted and varnished four vestibules. Repairs to roofing, new ridge roll.

Moody School (Old)—The wooden building has been repaired and placed in shape for Industrial School work. Roof repaired and air ducts have been boarded over in the brick building, the windows have been repaired and about one hundred fifty lights of glass set in both buildings. Plastering of ceilings removed and matched spruce ceiling put on.

Morrill School—Fences have been repaired and extensive alteration made for Industrial School, such as cases, tables, blackboards, partition off rooms in upper story. Kalsomined upper story and painted fences, new partitions, and shellaced and varnished woodwork of entire upper story. New sink, plumbing and piping alterations.

Middlesex Village School—Took out the dry closets and replaced them with modern water closets. Repaired fences, painted and varnished basement and school furniture. General repairs to building.

Mann School—New concrete walk to Broadway entrance. Roofing repaired. Dry well in basement rebuilt. Extensive plastering repairs in the different rooms and the whole

building whitewashed. Painted the whole building inside and refinished all blackboards, blacked all steam pipes. New sewer laid connecting building with Broadway sewer.

Moody Street School—Two new sinks were placed in basement. Glass panels placed in door at head of stairs. Bulkhead stairs recovered and fences repaired.

Pawtucket School—Driveway paved, yard graded. Fences repaired.

Plain Street School (Laura Lee School)—Painted walls in the teachers' closets. Fences and porches repaired. New checks on doors. Weather strips on windows.

Pine Street School—New chairs in three rooms. Furnaces repaired.

Pond Street School—New sinks, general repairs, roofing and heating repairs. Grained and varnished class rooms and painted hallways, kalsomined walls throughout building.

Oakland School—Repaired all windows, fences and bulkhead. New sink on first floor. Repaired front steps. Painting, heating and general repairs.

Tenth Street School—Boiler retubed. Fences repaired.

Varnum School—Repaired fences, basement windows, new sash in schoolrooms and porches and bulkhead repaired. Erected 4' wire fence 125' long on north side of lot. Five new ceilings. Kalsomined five schoolrooms and corridors. Removed partitions in old dressing rooms and erected grill work in place of same. Paved and graded yard and repaired retaining walls. Painted woodwork of building outside, including screens, iron work and fences. Grained window and door casings in eight class rooms and corridors, also varnished woodwork in the eight rooms. Bronzed all steam pipes, painted and glazed all storm windows. Erected fire escape from assembly hall to school yard.

Weed Street School—New sink in basement. Weather strips on seventeen windows. Painting around sinks and blackboards. General repairs.

West Sixth Street School—New steps on boys' side of building. Cut large gate in side fence. Removed old water closets and replaced them with new and modern fixtures. Concreted floor of basement. Painted new steps and borders in corridors.

Many boilers in both schoolhouses and other public buildings have been repaired. In some instances the repairs asked for by the insurance inspector were quite expensive. Several boilers had to be retubed, even after having been inspected by the insurance inspector and reported as "in good order." Brick work and fire boxes on most boilers have received attention and are now in good order.

In addition to the above work I might mention that over two hundred bubble fountains were installed in the several school buildings, for which the School Department reimbursed this Department because of the fact that an appropriation had not been made by the City Council covering the expense of such work. This work alone cost upward of \$3,000.

Besides paying for the installation of bubbles, the School Department paid for most of the work done on Industrial School buildings.

SUMMARY OF EXPENSE

The cost of repairs and maintenance as paid from the regular and special appropriations, chargeable to each building under care of this department.

PUBLIC BUILDINGS

Ambulance Stable.....	\$ 58 44
Board of Health Stables, Hospital and Crematory	318 06
Carpenter Shop	377 32
City Hall	984 36
City Hospital	4,882 41
City Stables	493 58
Memorial Building	818 79
Police Station	3,071 44
Rifle Range	2,441 99

FIRE ENGINE HOUSES

Engine 1	\$ 201 33
Engine 2	271 08
Engine 3, Central Fire Station	1,080 11
Engine 4	706 73
Engine 5	532 80
Engine 6	256 48
Hose 7	1,510 90
Hose 8	14,417 49
Hose 9	41 01
Hose 10	98 17
Hose 11 and Truck 1	1,059 53
Hose 12 and Truck 4	1,015 08
Truck 2	291 82
Protective 1	130 89

SCHOOLHOUSES

Grammar and High School Buildings—

Bartlett (New)	\$ 500 66
Bartlett (Old)	2,028 85
Butler	681 93
Colburn	964 70
Edson	572 68
Franklin	886 08
Green	426 41
Greenhalge	932 70
High	2,677 99
High Annex	709 64
Highland	1,239 71
Lincoln	805 79
Moody (New)	869 03
Moody (Old)	548 94
Mann	1,629 42
Pawtucket	452 57
Riverside	424 00
Varnum	2,653 71
Washington	414 56

Primary School Buildings—

Agawam Street	\$ 84 16
Ames Street	314 49
Billings Street	155 93
Cabot Street	167 01
Carter Street	334 15
Central Street	867 81
Cheever Street	28 31
Chapel Street	144 33
Charles Street	319 79
Colburn	503 47
Cottage Street	577 36
Cross Street	98 23
Dover Street	136 97
Favor Street	413 42
Fayette Street	1 30
Grand Street	452 49
High Street	568 65
Howard Street	159 63

Kirk Street	\$ 90 66
Lakeview Avenue	323 97
Lexington Avenue	238 86
London Street	294 09
London Street Annex	1,092 68
Lyon Street	569 38
Mammoth Road	73 49
Middlesex Village	1,065 28
Moody Street	260 43
Morrill	1,267 34
Oakland	222 34
Pine Street	224 44
Plain Street	160 88
Pond Street	334 09
Powell Street	155 55
School Street	55
Tenth Street	354 80
Weed Street	183 87
West Sixth Street	461 05
Worthen	225 23

MISCELLANEOUS ITEMS OF EXPENSE

Coffin construction	\$ 485 65
Life saving apparatus	232 93
Office supplies, etc.	232 83
Transportation charges	1,680 48
Furniture renovation	990 97
General supervision and clerical work	6,215 80
Teaming and care of shop	1,280 11
General work	1,411 85
Half holiday expense	528 69

CONTRACTS AND AGREEMENTS

The following jobs were figured in competitions and in each case the work was given to the firm or individual submitting the lowest figure (marked thus *).

City Hall—

Heater for tempering water for boilers.

Barker, H. R. Mfg. Co.	\$800 00
Carroll Bros.	600 00
Cotter, John A. & Co.	585 00
Farrell & Conaton	572 00
Leary, D. J.	549 00*
Scott & O'Day Co.	612 00
Welch Bros.	690 00

City Hospital—

Plumbing for bath room in women's hospital.

Barker, H. R. Mfg. Co.	\$205 00
Costello, T. & Co.	177 00
Desmarais & Bourret	280 00
Farrell & Conaton	179 00
Hanchett & Co.	201 00
Leary, D. J.	180 00
Lynde, E. A. & Co.	382 00
McMahon, J. F. & Co.	219 00
Shaw, E. T. Co.	139 00
Scott & O'Day Co.	137 00*
Welch Bros.	190 00

Race Street Fire House—Rebuilding—

General contract for new building on site of old house.

Connors Bros. Co.	\$21,799 00
Conlon, Patrick.....	18,575 00
Conant, C P.	18,771 00
Drapeau, William	20,889 00

Johnson, T. W.	\$18,266 00
O'Hearn, Patrick	18,798 00
Penn, William H.	17,718 00
Twohey, E. G.	16,448 00*
Walker, Daniel H.	18,200 00
Whittet, James	18,842 00
Wiggin, Burton H. Co.	18,770 00

Rifle Range—

Barricade between 300 and 500 yard firing point and backstop for revolver range.

Barton, Cyrus	\$650 00
Connor, M. F.	947 00
Jalbert, Joseph.....	647 00*

Middlesex Village School—

Water closets to take place of dry closets.

Barker, H. R. Mfg. Co.	\$601 00
Carroll Bros.	748 00
Cotter, John A. & Co.	595 00
Drury, Harry S.	585 00
Farrell & Conaton	649 00
Gaffney & Kerwin	559 00
Leary, D. J.	685 00
McMahon, J. F. & Co.	702 00
Shaw, E. T. Co.	649 00
Scott & O'Day Co.	524 00*
Welch Bros.	740 00

Varnum School—

Plastering five ceilings and kalsomining side walls in five rooms.

Crosby, B. F. & Co.	\$507 00
Connor, Matthias F.	475 00
Riley, Frank E.....	450 00*

Varnum School—

Fire escape from assembly hall.

Knapp, Arthur P.	\$715 00*.
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PUBLIC BUILDINGS AND SCHOOLS VALUATION

City Hall, granite	\$ 410,000
Memorial Building, granite	200,000
Police Station, Stable, City Scales and the Public Landing, brick	98,250
Lighting Station, Willie Street, wood	3,000
City Stables, Shed, Board of Health Stables, City Carpenter Shop and other buildings on both sides of Broadway, stone, brick and wood	100,000
City Hospital and Almshouse, brick and wood	200,000
Rifle Range, wood	14,000

FIRE DEPARTMENT

Engine 1, Gorham Street, brick	27,000
Engine 2, Branch Street, brick	22,000
Engine 3, Palmer Street (Central Fire Station) brick	90,000
Engine 4, High Street, brick	24,000
Engine 5, Mammoth Road, brick	15,500
Engine 6, Fletcher Street, brick	18,000
Hose 7, Central Street, brick	13,000
Hose 8, Merrimack Street, brick	18,000
Hose 9, Lincoln Street, wood	5,500
Hose 10, Fourth Street, brick	15,000
Hose 11 and Truck 1, Lawrence Street, brick	26,000
Hose 12 and Truck 4, West Sixth Street, brick	38,000
Truck 2 and Chemical, Westford Street, brick	18,000
Protective 1, Warren Street, brick	11,000

GRAMMAR AND HIGH SCHOOLS

High, Kirk and Anne Streets, brick, 20 rooms and hall	250,000
High Annex, John and Paige Streets, brick, 16 rooms and drill hall	105,000
Bartlett (old), Clark Street, brick, 8 rooms	25,000
Bartlett (new), Wannalancit Street, brick, 16 rooms and hall ..	108,000
Butler, Gorham Street, brick, 12 rooms and hall	63,000
Colburn, Lawrence Street, brick, 8 rooms	25,000

Amount carried forward \$ 1,942,250

Amount brought forward.....	\$ 1,942,250
Edson, Highland Street, brick, 11 rooms	25,000
Franklin, Branch Street, brick, 8 rooms	25,000
Green, Merrimack Street, brick, 10 rooms and hall	105,000
Greenhalge, Ennell Street, brick, 10 rooms and hall	75,000
Highland, Pine Street, brick, 12 rooms and hall	67,000
Lincoln, Chelmsford Street, brick, 12 rooms and hall	77,000
Moody (old), East Merrimack Street, brick, wood ell, 10 rooms	20,000
Moody (new), Rogers Street, brick, 12 rooms and hall	80,000
Mann, Broadway, brick, 8 rooms, wood, 12 rooms	25,000
Pawtucket, Mammoth Road, brick, 8 rooms and hall	53,000
Riverside, Woburn Street, wood, 8 rooms	35,000
Varnum, Myrtle Street, brick, 17 rooms and hall	110,000
Washington, Lang Street, brick, 10 rooms and hall	90,000

PRIMARY SCHOOLS

Agawam Street, wood, 4 rooms	9,000
Ames Street, wood, 4 rooms	9,500
Billings Street, wood, 4 rooms	16,000
Central Street, wood, 4 rooms	13,500
Cross Street, brick, 4 rooms	24,000
Carter Street, brick, 8 rooms and hall	52,000
Chapel Street, wood, 2 rooms	4,000
Cottage Street, wood, 2 rooms	4,500
Colburn Primary, Charles Street, wood, 7 rooms and hall	31,000
Charles Street, wood, 4 rooms	20,000
Cabot Street, brick, 4 rooms	23,500
Cheever Street, wood, 4 rooms	12,000
Dover Street, wood, 4 rooms	13,500
Favor Street, brick, 4 rooms	28,000
Fayette Street, wood, 2 rooms (unused)	3,500
Grand Street, wood, 2 rooms	5,000
Howard Street, brick, 2 rooms	5,000
High Street, wood, 3 rooms	9,000
Kirk Street, brick, 2 rooms	18,000
Lyon Street, brick, 4 rooms	20,000
Lyon Street Annex, wood, 1 room	5,400
Lexington Avenue, wood, 2 rooms	10,000
Lakeview Avenue, wood, 4 rooms	8,500
London Street, wood, 2 rooms	3,000
London Street Annex, wood, 2 rooms	5,000

Amount carried forward \$ 3,082,150

Amount brought forward.....	\$3,082,150
Mammoth Road Kindergarten, wood, 1 room	4,000
Morril, brick, 4 rooms	19,000
Middlesex Village, wood, 4 rooms	16,000
Moody Street, wood, 6 rooms	20,000
Oakland, wood, 2 rooms	12,000
Old Middlesex Village, wood, (unused)	2,000
Plain Street, wood, 6 rooms	21,000
Powell Street, wood, 2 rooms	8,000
Pond Street, wood, 2 rooms	6,000
Pine Street, wood, 4 rooms	23,000
School Street, wood, 2 rooms (unused)	7,500
Tenth Street, wood, 4 rooms.....	9,000
Worthen Street, brick, 5 rooms	25,000
Weed Street, wood, 4 rooms	10,500
West Sixth Street, wood, 4 rooms	7,000
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Total value of real estate under care of Buildings Department.	\$3,272,150

**Estimated value of the property belonging to and in care of Buildings
Department at work shop on Broadway and in office at City Hall**

Buildings—shop and storehouses	\$10,500 00
Machinery, tools, etc.....	2,800 00
Hardware	150 00
Lumber	767 38
School furnishings	2,000 00
Elections property	6,009 77
Coffins, stock and tools	352 00
Stable property	1,731 00
Masons' stock and tools	200 00
Pipers' stock and tools	700 00
Painters' stock and tools	1,100 00
Office property.....	826 00
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Total	\$27,136 15

BUILDING INSPECTION

For years Lowell has shown a healthy growth both in population and in general business and although the past year has developed a slight depression in business as regards work of some of our larger corporations, preparations have been made by many of these to further increase their capacity for business. The outlook is therefore bright, for the reason that there is great prospect that business will increase within a short time and that the plants will again be taxed to their utmost turning out manufactured products. When this time arrives, and in my opinion it will be within a very short while, in fact, I feel it is already here, we may expect a building boom, the like of which Lowell has never known.

Notwithstanding the slight depression in business of these corporations there has been general activity in the building line and although this year's building operations, as regards the report of the estimated cost of buildings for which permits were issued, falls off over a quarter of a million dollars from last year's figures, I feel that there has been more work for building tradesmen during the past year than for a score of years previous. In addition to the work started during the year, it must be remembered that a great many buildings were started the year previous and were only completed recently, while there are a few more that may not be finished until the middle of 1912.

The following tables show a summary of the permits issued during the year for both new buildings and alterations to old buildings. As shown in the first table the total number of permits issued was 564 against 562 for the year previous, showing an increase during the year of only two, while the estimated cost for the work for 1911 was \$1,500,269 against \$1,777,654 for the previous year, showing that the value of work in 1911 was \$277,385 less than in 1910.

TABLE OF BUILDING OPERATIONS

MONTHS	NEW BUILDINGS			ALTERATIONS AND ADDITIONS			SUMMARY	
	Wood	Brick Fireproof etc.	Estimated Cost	To Wooden	To Brick and Fireproof	Estimated Cost	Whole Number Permits	Total Estimated Cost
January	11	2	\$ 11,625	9	3	\$ 7,565	25	\$ 19,190
February	10	1	13,900	9	1	6,965	21	20,865
March	26	..	56,240	28	5	20,365	59	76,605
April	31	3	130,665	35	3	27,144	72	157,809
May	26	3	63,628	32	4	30,275	65	93,903
June	21	4	195,765	21	4	20,480	50	216,245
July	16	2	52,900	18	2	17,342	38	70,242
August.....	14	..	25,180	25	7	41,130	46	66,310
September.....	24	4	368,150	18	3	9,225	49	377,375
October	30	6	209,965	24	4	38,150	64	248,115
November	22	3	96,375	9	3	3,050	37	99,425
December	22	..	45,935	14	2	8,250	38	54,185
Totals	253	28	\$1,270,328	242	41	\$229,941	564	\$1,500,269

BUILDING OPERATIONS FOR EIGHT YEARS

Year	Wood Frame	Brick Firepr'f Stone	Estimated Cost	To Wood Frame	To Brick Fireproof Stone	Estimated Cost	Total Permits	Total Estimated Cost
1904	118	8	\$ 584,935	53	12	\$ 92,370	191	\$ 677,305
1905	151	14	796,560	77	9	81,530	251	878,090
1906	164	12	724,124	152	25	177,621	353	901,745
1907	188	13	1,005,748	200	40	219,569	441	1,225,317
1908	205	13	797,670	252	27	221,411	497	1,019,081
1909	222	17	1,047,844	217	50	281,009	506	1,328,853
1910	246	19	1,471,496	263	34	306,158	562	1,777,654
1911	253	29	1,270,328	242	40	229,941	564	1,500,269
Totals	1,547	125	\$7,698,705	1,456	237	\$1,609,609	3,365	\$9,308,314

NEW BUILDINGS

Permits issued, showing number issued each month and total for the year.

KIND OF BUILDING	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
One family dwellings.....	4	7	6	12	7	8	2	5	10	11	12	11	95
Two family dwellings (one with store).....	1	2	8	4	8	5	3	1	5	6	7	5	55
Three family dwellings.....	..	..	1	1	..	2	2	..	1	4	..	1	12
Four family dwellings .....	..	..	..	..	2	..	..	..	..	..	..	1	3
Five family dwellings (with store)....	..	..	1	..	..	..	1	..	..	..	..	..	2
Six family dwellings (one with store)...	..	..	..	2	..	2	..	..	1	..	..	1	6
Ten family dwellings (five stores) ....	..	..	..	..	..	..	..	1	..	..	..	..	1
Apartment houses.....	..	..	1	..	..	1	..	..	..	..	..	..	2
Auto houses	1	..	2	5	4	4	2	..	3	2	1	1	25
Business blocks .....	..	..	..	..	..	..	..	..	2	..	..	..	2
Barns, wagon houses, etc. ....	..	..	3	4	2	..	1	1	..	..	..	..	11
Church	1	1	..	1	1	..	..	..	..	..	..	..	4
Convent .....	..	..	..	..	1	..	..	..	..	..	..	..	1
Club house.....	..	..	..	1	..	..	..	..	..	..	..	..	1
Chimney .....	..	..	..	..	..	..	..	..	..	1	..	..	1
Gymnasium .....	..	..	..	..	..	..	..	..	..	1	..	..	1
Hen houses.....	..	..	1	..	..	..	1	3	..	2	..	..	7
Manufactory	1	..	..	..	..	1	..	..	1	2	2	..	7
Power plants .....	..	..	..	1	..	..	1	..	..	1	..	..	3
Storage	4	..	3	2	..	2	2	1	1	6	..	2	23
Stores and offices (Small) .....	..	1	..	1	2	..	2	2	2	..	1	..	11
Warehouses .....	..	..	..	..	..	..	1	..	..	..	2	..	3
Workshops	1	..	..	..	2	..	..	..	2	..	..	..	5
	13	11	26	34	29	25	18	14	28	36	25	22	281

DWELLING PERMITS

Table showing the number of permits issued during each of the past five years for buildings used in whole or in part as dwelling.

KIND OF BUILDING	1907	1908	1909	1910	1911	Total
One family dwellings	77	49	71	73	95	365
Two family dwellings	29	61	48	64	55	257
Three family dwellings	13	15	9	12	12	61
Four family dwellings	4	3	5	5	3	20
Five or more family dwellings	8	13	16	9	11	57
Totals	131	141	149	163	176	760

SPECIAL PERMITS FOR 1911

	Banners	Flat	Projecting	Roof	Total
Signs	5	51	55	14	125
wnings					120
Total					245

GAS PIPING INSPECTION

The following is a brief summary of the work done by the Inspector of Gas Piping:

BUILDINGS INSPECTED

New Buildings.		Old Buildings.	
One family dwellings	77	One family dwellings	80
Two family dwellings	51	Two family dwellings	50
Three family dwellings	10	Three family dwellings	7
Four family dwellings	4	Four family dwellings	27
Six family dwellings	6	Five family dwellings	4
One family dwelling with store	2	Six family dwellings	11
Four family dwelling with store	1	Seven family dwellings	1
Five family dwelling with store	2	Eight family dwellings	4
Six family dwelling with store	2	Nine family dwellings	5
Stores	14	Twelve family dwellings	3
Churches	2	Twenty-four family dwellings .	1
Business block	1	Twenty-seven family dwellings	1
Garage	2	Stores	8
Apartment houses	4	Church	1
Office	1	Lodging house	1
		Business blocks	3
		Manufactory	3
		Alterations and extensions ...	125
	<hr/>		<hr/>
	179		335

Visits of Inspections.

To new buildings	380
To old buildings	580
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Total	960
Visits on unfinished work	10
Jobs visited and work unfinished	3
Complaints investigated	27
Changes recommended	71

REVIEW OF PERMITS

It might be well at this time to mention a few of the more important buildings erected during the year just past. The following are a few of the manufacturing and business buildings:

Appleton Co., addition to power house, Robeson street; Appleton Co., additional story for storage, Jackson street; Merrimack Mfg. Co., addition to power house, Dutton street; Merrimack Mfg. Co., finishing mill, Worthen street; Lowell Gas Light Co., power plant, School and Rock street; Lowell Gas Light Co., addition to retort house, School street; Bigelow Carpet Co., dyehouse along Pawtucket Canal; Bigelow Carpet Co., additional story to mill, off Market street; Bigelow Carpet Co., large chimney off Market street; Lowell Bleachery Co., power house and other alterations, Bleachery street; Lamson Consolidated Store Service Co., factory, Walker street; Hamilton Mfg. Co., alterations, mill buildings, Central street; Hamilton Mfg. Co., four story mill, along Pawtucket Canal; American Hide and Leather Co., beam and hide house, Perry street; Lowell Shuttle Co., factory, Tanner street; Harvard Brewing Co., alterations; cold storage building, Payton street; New England Tel. & Tel. Co., exchange building, Appleton street; Lowell Textile School, power house, Colonial avenue; Rogers Hall School, gymnasium, Rogers street; James C. Donovan's business block, Market street; C. E. and W. J. Bradley, business block, Central street; John F. Saunders, warehouse, rear Gorham street; Frank G. Cover, warehouse, Middle street; Appleton Bank Building, addition and alteration, Central street.

Miscellaneous buildings—St. Margaret's Parish, church, Stevens street; St. Columba's Parish, church, Mammoth road; St. John's Parish, addition to church, Gorham street; Oblate Fathers, grotto, Pawtucket street; Oblate Fathers, convent, Moody street; Pierre Morin, stores and flats, Moody street; Michael Corbett, stores and flats, Gorham street; Eugene Chaput, stores and flats, Lakeview avenue; Adolph Delisle, apartment house, Merrimack street; A. B. Beal, apartment house, Merrimack street; Frank Richard, apartment house, Moody street.

There has been quite a little development in the residential sections of the city, several enterprising real estate men have been very active in building on certain tracts of land that have been cut up for sale and in many instances the dwellings erected are of the better class of moderate priced houses. Jacques Boisvert, several cottages, and tenement houses on Farmland road, Cumberland road, Carolyn and West 6th streets; Esther Wolff, tenement buildings, Grand and Chelmsford streets; Frank E. Harris, two family dwellings, Harris avenue; A. J. Ryan, dwellings, Tyler Park land; Arthur Genest, dwellings, Forrest and Chelmsford streets; Avila Sawyer, dwellings, Parker street; Charles Watt, dwellings, Chelmsford street near City Hospital.

Many new residences have been built in the Highlands, Belvidere, Centralville and Pawtucketville. Mention might be made of the following:

Mrs. L. M. Woodworth, Hawthorn street; Henry J. Maguire, Florence avenue; Mrs. Ada M. Weiler, Pine street; Mrs. May C. Leach, Methuen street; A. W. Greeley, Beacon street; Dr. Charles E. Simpson, Holyrood avenue; J. Albert Pinard, D street; C. A. Morton, Fairfield street; Dr. Charles F. Harris, Summit street; Harry Knowlton, Monadnock avenue.

The two family dwelling is as popular in Lowell as in the towns adjacent to Boston. The following might be mentioned as up to date dwellings of this class:

Florence N. Preston, Rutland street; Cornelius E. Collins, Huntington street; Rachel M. Davis, Holden street; C. F. Stackpole, Grace street; C. H. Twohey, Stevens street; Florence M. Turner, Rutland street; Addie M. Emmott, Chester street; Arthur J. Brown, Florence avenue; Dr. C. I. Constantineau, Mt. Washington street; S. D. Brown, Gibson street; Annie Duffy, Methuen street and many others.

The following buildings for which no permits have been issued and should be included in the report of building, are:

Hose 8, fire engine house, Merrimack street; Water Works, pumping station, Boulevard; Water Works, reservoir, Christian Hill; State Armory, addition, Westford street.

CONCLUSION

Just a final word before closing the book of the year 1912.

The year will long be remembered by me as a very busy one. I feel that the city has received full value for every dollar expended for I have had the work of the department constantly in mind every day of the past year. Having now held the position of Inspector of Buildings for three consecutive years, and although I have worked hard in the interest of the city, I have enjoyed my work and feel great pleasure in the thought that I have accomplished much in the way of improvements in many of our city buildings. There still remains much that might be done but with a comparatively small appropriation it is very slow work bringing our many old buildings, which for years owing to meagre appropriations have been neglected, up to the standard of the times.

In the report of the year 1910, I offered four suggestions which were later considered by last year's City Council, namely; "A new building for Hose 8 on Merrimack street, a new stable for the Health Department on Broadway, the remodelling of Hose 7 House on Central street and the question of seizing land leased by the city on West London street, used for several years for school purposes and remodelling the building located there." With the exception of the Health Department stable the suggestions were acted upon favorably and the work as outlined has been done. The West London Street School has been remodelled and the land seized, the new building to be occupied by Hose 8 will be ready for occupancy within a few days and the painters are putting the finishing touches on the remodelled Hose 7 house. It gives

me pleasure to refer to these facts for I feel that unless my suggestions were of some value they would not have been even considered, much less acted upon favorably in three instances at least.

This time I am going to renew my fourth suggestion, that is; that a new structure be built to replace the old tumbled down stables and sheds of the Health Department. It is hardly necessary to call your attention to the condition of the buildings known as the Health Department stables for I don't think there is a member of the Municipal Council who will not agree with me when I say that they are a disgrace to the city and wholly unfit for use as the stable and headquarters of the department whose province it is to guard the health of the city.

My suggestion is this; appropriate \$25,000 and build a modern brick stable that will take the place of all the old wooden buildings on the east side of the Health Department yard. There are plans in this office for such a building, not a fancy structure but a good substantial building that will meet the needs of the department for many years. The plans are for a building 210 feet long by 40 feet wide, two stories in height; the basement could be used for wagon storage; the first story will provide for 48 horses, carriage and wagon rooms, blacksmith and carpenter shop, and office; the second story for hay loft, lumber storage, harness shop, etc. I am sure that with an appropriation as above mentioned a good substantial building could be built and the city would save thereby the many thousands of dollars that will have to be spent for repairs in the near future on these old structures.

In closing I will mention the fact that I have inspected many buildings during the year. In all, I would say, I have made upward of six hundred visits of inspection to buildings in process of erection, being altered, repaired, or where complaint has been made regarding some alleged violation of the Building Ordinance. In each case I have endeavored to be as lenient as possible, so as not to cause any unnecessary expenditure of money on the part of the owners, always keeping in mind the requirements of the ordinance and the safety of the public.

I regret to say that this part of my work, owing to the demands on my time, has not received the attention I would wish to give, the fact being that many times I have had to rely upon the word of contractors and owners and could not personally follow up the progress of the work on the various structures.

Respectfully submitted,

JAMES DOW,

Inspector of Buildings.



